

# TOWSON STATE COLLEGE BULLETIN



GRADUATE STUDIES

1974-1975

March 1975

***The student is responsible for complying with the provisions and requirements as they are written in this publication; however, the provisions of this publication are not to be regarded as an irrevocable contract between the student and Towson State College. The College reserves the right to change any provision or requirement at any time within the student's term of residence, or to add or withdraw course offerings.***

## ACCREDITATION

Towson State College is accredited by the Middle States Association of Colleges and Secondary Schools, the Maryland State Board of Education and the National Council for the Accreditation of Teacher Education. The College is a member of the American Council on Education and is approved by the American Association of University Women.

# TOWSON STATE COLLEGE



GRADUATE STUDIES 1974-1975  
BALTIMORE, MARYLAND 21204



DR. JAMES L. FISHER, President

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# ACADEMIC CALENDAR 1975

## 1975 SPRING SEMESTER

Jan.	22 Wed.- 23 Thu.	Registration in College Center (In person). See Registration Time Schedule in Spring Evening Schedule.
Feb.	3 Mon. 14 Fri.	Classes begin. Final date to apply for Advancement to Degree Candidacy and Comprehensive Examinations. Final date to file Diploma Card for June Graduation.
Mar.	27 Thu.	Spring Vacation begins after last class.
Apr.	7 Mon. 12 Sat.	Classes Resume. Comprehensive Examination (Most Advancement to Degree Candidacy Examinations will be administered on this date.)
May	16 Fri.	Final date to apply for Advancement to Degree Candidacy and Comprehensive Examinations. Final date to submit Diploma Card for August Graduation.
	23 Fri.	Last day of classes.
Jun.	1 Sun.	Commencement.

## 1975 SUMMER SESSIONS

Jun.	9 Mon. 10 Tue. 18 Wed.	Registration in College Center (In person). See Registra- tion Time Schedule in Summer Sessions Bulletin. Day and Evening classes begin.
Jul.	12 Sat.	Comprehensive Examination (Most Advancement to Degree Candidacy Examinations will be administered on this date.)

## 1975 FALL SEMESTER

Aug.	27 Wed.- 28 Thu.	Registration in College Center (In person). See Registration Time Schedule in Fall Evening Schedule.
Sep.	8 Mon.	Classes begin.
Oct.	3 Fri.	Final date to apply for Advancement to Degree Can- didacy and Comprehensive Examinations. Final date to submit Diploma Card for December Graduation.
Nov.	1 Sat.	Comprehensive Examination. (Most Advancement to Degree Candidacy Examinations will be administered on this date.)

# General Information

## HISTORY OF THE COLLEGE

Towson State College, the oldest and largest of Maryland's public colleges, traces its history back to 1865 when the General Assembly of Maryland established a state-wide public school system. The first state teacher training institution was the Maryland State Normal School which in 1935 became the State Teachers College at Towson. In 1963 the name Towson State College was adopted.

Formally opened in Baltimore on January 15, 1866, the Normal School was, for many years, the only institution devoted exclusively to the preparation of teachers for the public schools of Maryland.

The School occupied three different locations in the City of Baltimore before moving to its present suburban location in 1915.

In 1946 the arts and sciences program was introduced at Towson. Beginning as a two-year transfer program, it was extended to a four-year, degree-granting program in

In 1963 the College was authorized, by action of the Legislature, to expand its offerings in the arts and sciences while maintaining a strong program in teacher education and to change its name from State Teachers College at Towson to Towson State College.

In 1966 the College completed 100 years of service to the State, having graduated more than 12,000 students during its first century.

## DEVELOPMENT OF GRADUATE STUDIES

Graduate Studies at Towson State College began in June 1958 with the establishment of a Master of Education degree program in Elementary Education. This was initiated after two years of preliminary study and recommendations from teachers and school administrators.

Sixty-seven students were admitted to the degree program in the first session of 1958, and the number of students has increased to the more than 7000 enrolled in November 1974. Towson State College offers twelve programs leading to the Master's degree. A number of other programs are in various stages of planning and approval. The programs presently offered and the dates of approval by the Board of Trustees are as follows:

### Master of Arts

General Studies	1974
Geography	1970
Psychology	1974

### Master of Education

Art Education	1965
Early Childhood Education	1968
Elementary Education	1958
Music Education	1969
Reading	1969
Secondary Education	1965

### Master of Science

Audio Visual Communications	1971
Biology	1970
Speech Pathology and Audiology	1972

The Master of Education degree in Urban Teaching instituted in 1966 has been discontinued. The Master of Arts degrees in General Psychology (1970) and School Psychology (1967 M.Ed., 1970 MA.) and the Master of Education Degree in Guidance and Counseling (1965) have been incorporated in the current Master of Arts degree in Psychology.

## THE CAMPUS

The College is situated on a campus of nearly 300 acres located a mile and one-half beyond the northern border of the city of Baltimore.

Within an eight-mile radius of the campus are all the cultural advantages of the city of Baltimore — the Peabody Conservatory of Music and Library, the Enoch Pratt Free Library, the Walters Art Gallery, the Baltimore Museum of Art, and the many theaters and other cultural centers necessary for a well-rounded college experience.

Campus buildings and facilities give excellent support to the various College programs. The following are of particular interest to graduate students:

1. Stephens Hall, one of the original campus buildings, houses the departments of Mathematics and Psychology. This building with its clock tower has become a landmark in the Baltimore area.
2. The Albert S. Cook Library has well-developed holdings in the arts and sciences and teacher education. Towson's long history of teacher education is reflected in the extensive collections of bound volumes, reference works and periodicals in this field, as well as substantial holdings in microfilm and microcard. The collections of curriculum materials, textbooks, trade books and audio-visual aids are particularly noteworthy.
3. Van Bokkelen Hall is a classroom building for the department of Communication Arts and Sciences. In addition, it contains recording and listening rooms for this department.
4. Linthicum Hall, completed in 1967, is the largest classroom building on campus. Many faculty offices are also located here.
5. Smith Science Hall was first occupied in the fall of 1965. Included in the building are biology, chemistry, physics and science education offices, classrooms, laboratories and special function rooms such as student and faculty work and preparation areas. The Watson-King Planetarium is on the top floor. A large addition to the building is under construction.
6. Lida Lee Tall Learning Resources Center greatly facilitates field studies of children from nursery school through grade six.
7. Burdick Hall, the gymnasium, and additional athletic fields were completed in the 1967-1968 college year. A new gymnasium is under construction which will contain three wings. (Academic open space, and Activities Instructional). Within the ten million dollar building will be an indoor track, an area for 3 basketball or 6 tennis courts, and seating for 5,000 people.
8. The College Center, a three-story building opened in the fall of 1971, provides cultural and recreational activities for the entire campus. Located in the new center are the post office, book store, box office, dining areas for private and banquet size groups, bowling alleys and a billiard room.
9. The Administration Building, a three-story structure at the corner of Osler and Towsontown Boulevard, opened in 1972. It contains the principal administration offices and some faculty offices. The Graduate Division Offices are located on the main level, west end.
10. The Fine Arts Building opened in May, 1973, houses the art, music and theatre arts departments as well as public performances areas, art galleries, studios, laboratories and offices.
11. Glen Esk, formerly the president's home, is now occupied by Counseling and Psychological Services.



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## **BOARD OF TRUSTEES**

The College is governed by a nine-member Board of Trustees — eight members appointed by the Governor for nine-year terms — and the State Superintendent of Schools, a permanent member, ex officio. This same board also controls the five other state colleges.

Created by the General Assembly of 1963, the Board was a recommendation of the Commission for the Expansion of Public Higher Education in Maryland and replaced the State Board of Education as the College's controlling agency.

## **GRADUATE STUDIES COMMITTEE**

The Graduate Studies Committee determines policy for all graduate programs. Graduate curriculum matters are also the responsibility of the Committee. The membership is comprised of the Dean of Graduate Studies and the Chief Academic Officer, both of whom serve in ex officio, non-voting capacities, and six members of the faculty appointed by the President of the College for overlapping terms of three years. The Chairman and Secretary of the Graduate Studies Committee are elected from the membership of the Committee. Meetings are held monthly during the academic year and at other times when necessary.

## **GRADUATE STUDIES COORDINATORS**

The Graduate Studies Coordinators is a group comprised of the coordinators of each graduate program and the Associate Director of Graduate Studies. This group administers all graduate work within the policies set by the Graduate Studies Committee.

## **ADVISEMENT**

Graduate student advisement is the responsibility of the Dean and Associate Director of Graduate Studies, the Graduate Studies Coordinators and faculty members serving on the Graduate Staff. Students are encouraged to seek an appointment with one of the advisory staff. All conferences with advisers should be arranged by appointment and well in advance of Registration dates.

## **GRADUATE DIVISION OFFICE HOURS**

The Graduate Division Office is open each weekday (except for scheduled holidays) from 8:30 a.m. to 5:00 p.m. The office is also open Monday through Thursday evenings until 7:00 p.m. During Registration, the Office is open in the evening according to the Registration schedule. Students may arrange for appointments with the Graduate Division Staff at other hours.

## **CORRESPONDENCE**

All correspondence concerning graduate study should be addressed to:  
Dean of Graduate Studies  
Towson State College, Baltimore, Maryland 21204

## **LIBRARY PRIVILEGES**

Graduate students are issued College identification cards for borrowing privileges. Books and materials from other libraries in the area may be requested on Inter-Library Loan by graduate students.

Mon-Thurs.	8:00 a.m. to 10:00 p.m.
Fri.	8:00 a.m. to 5:00 p.m.
Sat.	12:00 Noon to 5:00 p.m.
Sun.	2:00 p.m. to 9:00 p.m.

The faculty Reserve room is open until midnight Sunday through Thursday.

# Registration and Financial Information

## REGISTRATION

Information concerning registration may be obtained prior to each session in the Graduate Office. Students may avail themselves of the opportunity to register by mail according to Graduate Division and Evening and Summer Division procedures. Post baccalaureate students who have never applied for admission and are registering for the first time may take 300-level and 400-level courses by completing the "Application for Admission to Graduate Studies". Registration for 500-level and 600-level courses is contingent upon the granting of Graduate Student standing.

## FEES

Tuition and other fees are subject to change without notice by action of the Board of Trustees.

Any post-baccalaureate student enrolled in courses receiving graduate credit is considered to be taking graduate-level work. The semester hour fee, therefore, will be assessed at the graduate rate. Courses not offered for graduate credit taken by post-baccalaureate students will be assessed at the undergraduate rate for each semester hour.

A listing of the various fees follows:

Application Fee: a non-refundable fee assessed each student	\$10.00
Tuition: undergraduate, per semester hour	\$25.00
graduate, per semester hour	\$38.00
Registration Fee: a non-refundable fee assessed every student each term	\$10.00
General College Fee: a non-refundable fee assessed every on campus student each term	\$ 9.50
Late Registration Fee: a non-refundable fee assessed every student registering after the dates set for regular registration	\$ 5.00
Change of Course Fee: a non-refundable fee assessed for the addition or subtraction of courses from either the original application or from the registration form	\$ 5.00
Transcript Fee: charged after the first copy	\$ 2.00
Car Registration Fee: an assessment for each student bringing a car on campus	Fall and Spring Semesters \$ 4.00 Summer sessions \$ 5.00
Final or Make-up Examination Fee: a charge made if an examination is administered at other than the designated time	\$ 5.00
Laboratory Fee: charged for certain courses	see course description
Private Music Lessons:	\$50.00 plus tuition
Graduation Fee: for Master's Degree, Plan A (with Thesis)	\$30.00
Plan B (without Thesis)	\$25.00



# Student Personnel Program

Graduate students are welcome to use the facilities and services of the Student Personnel Program. Students are also invited to avail themselves of the many programs presented by the Public Programs Committee of the College.

## COLLEGE CENTER

The College Center is located near the Fine Arts Building and Burdick Hall. The College Center in cooperation with the academic departments provides a program of activities in which graduate students are encouraged to participate. These activities are publicized in the weekly calendar of activities, circulated to the departments and posted in the College Center.

The College Center is open Monday through Thursday evenings until 11 p.m., on Friday and Saturday until midnight and on Sunday evenings until 9 p.m. Included in the facility are eight bowling alleys, a T.V. lounge, a snack bar, a music listening room, 16 billiard tables, and showers and lockers for commuting students. The facility also includes the College Book Store, a large cafeteria, a meditation room, a central lounge, an art gallery and a special dining room. Facilities are available for all types of conferences and meetings. The Food Service area includes catering for any type of event from coffee and donuts to a gourmet dinner. Organizational offices and meeting spaces are included in the College Center. Graduate students are encouraged to use the facilities.

## BOOK STORE

The Book Store is located in the College Center. Classroom supplies, phonograph records, hard-back and paper-back books, gifts, magazines, as well as sundry personal items are stocked.

## TICKET BOX OFFICE

The Ticket Box office located in the College Center provides a discount ticket service for most of the local dinner theaters and movie theaters and other community activities. The office also handles all tickets necessary for our campus events. The Ticket Box Office is located on the main level of the College Center. The manager's extension is 568.

## HEALTH CENTER

The Anita Dowell Health Center is located northeast of Linthicum Hall. It is open week days until 9 p.m. and thereafter for emergencies. First aid is administered and appropriate referrals are made. All accidents on campus should be reported to the Health Center immediately. A mental health service is available for students seeking psychiatric help.

## FINANCIAL AID

Appointments may be made during the day and early evening hours with the appropriate official in the office of the Dean of Students to discuss financial aid or assistance in placement.

The Graduate Division at Towson State College offers a limited number of Graduate Assistantships each year to qualified students recommended by the appropriate department. The stipend for the Graduate Assistantship is \$2,500.00 plus remission of tuition fees. The student is required to provide appropriate work for the academic department each week during the semesters in which the Assistantship is in effect. Application forms for the Assistantship may be obtained in the Graduate Office. Detailed information may be obtained by writing to the Dean of Graduate Studies.

Financial aid is also available to post-baccalaureate students from State and Federal Programs. Information on the following programs may be obtained from the Financial Aid Office.

## FEDERAL AID PROGRAMS



**The National Direct Student Loan Program** (Formerly National Defense Student Loan) NDSL makes up to \$5,000 in four years available on a loan basis to undergraduate students and \$10,000 aggregate for graduate students who have proven financial need. There is no interest charge on this loan as long as the student continues in at least half-time status, but there is interest of 3% beginning nine months after the student leaves school. The recipient may have up to ten years to repay the loan following his or her departure from school. Special education teachers and teachers teaching in economically and culturally deprived areas may receive up to 100% cancellation. The money cannot be received until the student is registered for the semester for which the loan is granted.

**The College Work-Study Program (CWS)** makes jobs available to students with exceptional financial need. These jobs are usually assigned as part of the "Financial Aid Package". If at all possible, students are placed in positions that are related to their academic major or special interest. A student employed 10-15 hours per week for both semesters may expect to earn \$350-\$500 for the school year. Because of the nature of many work-study jobs, some students may be able to earn more in these positions.

To apply for the above Federal aid programs, students must file the **Graduate and Professional School Financial Aid Service (GAPSFAS)** application with instructions that a copy be sent to the Towson State College Financial Aid Office. The GAPSFAS application fee is \$4.00 (subject to change) and can be obtained from the above service at Box 2614, Princeton, New Jersey 08540 or from the Towson State College Financial Aid Office. In addition, a **TSC College Supplement Form A** (yellow) - Partial Application for Financial Aid may be obtained from and filed directly with the TSC Financial Aid Office. All forms must reach the Financial Aid Office no later than April 1, 1974 for first consideration. (Please allow 4-5 weeks for processing the GAPSFAS application by the G. & P. Financial Aid Service in meeting the April 1 deadline.) Applications received after April 1 are considered on a remaining funds basis only.

## STATE LOAN PROGRAMS

**The Guaranteed Loan Program** as operated in most states provides up to \$1500 per year for graduate students. If the applicant can demonstrate financial need (through the Financial Aid Application procedure) the Federal Government will pay the 7% interest on these loans as long as the student is in school and for nine months after graduation or leaving school (regardless of reason for departure). If the applicant cannot demonstrate need, he may still qualify for the loan but not the Federal Interest Subsidy.

Applications to Maryland residents may be received from and must be processed by the Financial Aid Office before final arrangements for the loan are made with the bank. Out-of-state students may obtain applications from their local banks.

#### **RESIDENCE ON AND OFF CAMPUS**

Provision is made to house a few graduate students on campus. Interested students should communicate with the Director of Residence, Health Center. The Housing Office in the Health Center provides listings of off-campus accommodations. Arrangements for conferences should be made in advance by telephone.

#### **GENERAL COUNSELING**

Services of trained counselors in the Counseling Center are available to students who feel themselves to be in need of assistance in making personal, educational or career decisions. In a confidential and accepting climate, the student is afforded the opportunity to gain deeper insight into his needs and goals.

In addition to individual counseling, the center offers a program of group counseling, limited testing facilities, and extensive vocational and educational information.

The center staff participates in student and faculty activities which are concerned with the mental health of the college community.

#### **PARKING**

The operation and possession of motor vehicles in the Towson community and the use of campus parking facilities are privileges extended to all college personnel (faculty, staff, and students). These privileges carry with them the obligation to observe all regulations.

The map on the cover of this bulletin designates the parking areas for faculty, staff, and students. Student parking permits are \$4.00 each and may be obtained when other registration fees are paid.

#### **MESSAGES**

The switchboard at the entrance of Stephens Hall will be open until 11 p.m. Monday through Thursday, on Friday until 8 p.m., and from 9 a.m. until 5 p.m. on Saturday. Emergency messages ONLY may be received and relayed to staff and class members through the Evening and Summer School office. Emergency messages do not include reported absences or reasons for absence.

# Academic Regulations Governing Graduate and Post-Baccalaureate Study

## GENERAL ADMISSIONS POLICY

Admission to the Graduate Division at Towson State College is granted to all applicants whose academic and personal qualifications give promise of success in graduate study. The Board of Trustees of the State Colleges has established the requirement that admission to the State Colleges shall be determined without regard to race, color, religion, or sex.

All students seeking admission to a graduate degree program must file an "Application for Admission to Graduate Studies" prior to first enrollment and have official transcripts of all college work sent to the Graduate Division. Transcripts must be sent directly from the institutions attended to the Graduate Office at Towson State College. Programs have the option of requiring additional admissions devices (including letters of recommendation, the Graduate Record Examination, Aptitude and/or Advanced Tests and the Miller Analogies). Students should consult the Graduate Office for information concerning specific programs.

## ADMISSION TO COURSES FOR GRADUATE CREDIT

An applicant for admission to courses for graduate credit (classification: Graduate Student) must meet admission requirements in one of two ways: 1) By holding a Master's or Doctor's degree from a regionally accredited college or university, 2) By holding a Bachelor's degree from a regionally accredited college or university with a grade average of 3.00 ("B") and satisfactory attainment on all additional admissions devices required by the program. At the option of the coordinator and the Department Graduate Committee the grade average requirement may be satisfied by a 3.00 cumulative average, by a 3.00 average in the most recent 60 credits on the undergraduate academic record, or by a 3.00 average in the courses making up the undergraduate major and minor if the student plans to continue his studies in these same fields. The quality of graduate work taken beyond the Bachelor's degree, either as post-baccalaureate (non-graduate credit) courses or graduate credit courses, will be evaluated as part of the undergraduate record.

Students denied admission because of a low academic average (2.0-2.29) may register for courses as a non-degree student, and may take courses at the 300 and 400 levels in order to raise the cumulative average to a 2.3. At such time the student may again apply for admission. A student with a cumulative average between 2.0-2.29 may also become eligible for Conditional Admission by attaining a score of 1000 or higher on the Aptitude portion of the Graduate Record Examination.

All required application credentials (see General Admissions Policy) must be filed with the Dean of Graduate Studies no later than July 15 for the Fall Semester, November 15 for the Spring Semester, or March 15 for the Summer Session to be considered for admission. Those who are admitted as Graduate Students may register for courses numbered 100-699, but will receive graduate credit only in graduate level courses numbered 300-699 completed with grades of "C" or better. Some 300-level and 400-level courses do not carry graduate credit and are not listed in the



Graduate Bulletin. In order to maintain the classification of Graduate Student, a good academic record must be achieved even if the student is not in a degree program.

#### CONDITIONAL ADMISSION

Conditional Admission may be granted to those students whose academic achievement falls short of the standards required for Graduate Student standing, if one of the following requirements is met:

1) academic average in collegiate work — at least 2.30 in one or more of the areas of the student's record listed above in "ADMISSION TO COURSES FOR GRADUATE CREDIT"

2) Academic average in collegiate work — at least 2.00 in one or more of the areas of the student's record listed above in "ADMISSION TO COURSES FOR GRADUATE CREDIT" — and a score of 1000 or higher on the Aptitude portion of the Graduate Record Examination.

The student granted conditional admission must complete two specified courses with the grade of "B" or better in each course. The courses must be completed within one year of admission and may be used towards the degree when applicable.

Students admitted conditionally are enrolled as Non-Graduate Students.

#### GRADUATE WORK BY SENIORS AT TOWSON STATE COLLEGE

Seniors in their last semester of work at Towson State College may register for a maximum of six credit hours in the Graduate School if they meet the following requirements: 1) The graduate courses must be in excess of the credits required for the Bachelor's degree. 2) A letter sent from the student to the Dean of Graduate Studies requesting Graduate Student classification (which requires a 3.00 average), submitted in advance for specific graduate courses (by July 15 for the Fall Semester, November 15 for the Spring Semester, and March 15 for the Summer Session) must be approved. 3) All required application credentials must be submitted (see General Admissions Policy) and the student must be granted Graduate Student Standing prior to receipt of graduate credit for satisfactory completion of the courses, and prior to initiation of further course work.

#### COURSES FOR POST- BACCALAUREATE WORK (NON-DEGREE PROGRAMS)

Students who do not meet the standards required for classification as Graduate Student are permitted to register with the classification of Non-Graduate Student and pursue non-degree programs. Those students receiving Non-Graduate standing are eligible to take courses at the 100-level through the 400-level, but receive graduate credit only in courses numbered 300-499 and listed in the current bulletin as "Undergraduate and Graduate".

Non-Graduate Students pursuing non-degree programs at the post-baccalaureate level, however, must file the appropriate application.

Students who believe they can meet the admission requirements for Graduate Student standing but who fail to file the required application credentials in advance must register as Non-Graduate for the semester. However, they will be considered for admission to Graduate Student standing if their application credentials are received by the college before the end of the first quarter of the semester. If they are admitted to Graduate Student standing they will then be permitted to receive degree credit for satisfactory completion of any 300-level and 400-level graduate courses provided the courses are applicable to the degree program.

### CANDIDATES FOR DEGREES AT OTHER INSTITUTIONS

A student who is a candidate for an advanced degree at another college or university may enroll as a Graduate Student at this college for occasional work. He must present, at least two weeks before registration, a letter from the Graduate Dean of his parent institution indicating that he is in good standing and that credit earned at Towson State College is acceptable toward his degree.

### ADMISSION PRIOR TO RECEIVING BACCALAUREATE DEGREE

Admission may be granted to applicants whose required application credentials are incomplete because the baccalaureate degree has not yet been conferred if they are seniors in their last semester of work. Evaluation will be made on the basis of their undergraduate work through the first semester of the senior year. Standing granted in the pre-degree category is made at the option of the Graduate Program Coordinator to enable the student to begin work in courses carrying graduate credit immediately upon completion of the senior year. The applicant must have all application credentials completed during the first month after classes begin in the semester he initiates his course work. Admission standing is subject to cancellation or change if the admission credentials remain incomplete or do not meet the requirements for admission. If admission as a Graduate Student is denied, the student will be required to withdraw from any 500-level or 600-level courses for which he has registered. Continuation of students in courses below the 500-level will be permitted.

### FOREIGN APPLICANTS

Admission should be sought at least six months prior to the date of anticipated enrollment. All required admission credentials must be received in the Graduate Office prior to evaluation for admission.

Credentials required are:

1. An Application for Admission to Graduate Studies.
2. Official or certified true copies of all grade reports, diplomas, and academic records attesting to the completion of undergraduate work.
3. A letter from the student stating plans for attending, and reasons for selecting, Towson State College.
4. A financial summary stating amount and sources of support for the proposed duration of study.
5. Acceptable scores on the Test of English as a Foreign Language (TOEFL). Information about the TOEFL may be obtained from TOEFL, Educational Testing Service, Princeton, New Jersey 08540.

### GRADING SYSTEM

A four-point system is used to identify quality of academic work. The letter "A" designates work of superior quality; "B", work of good quality; "C", work of satisfactory quality; "D", work of less than satisfactory quality and not allowable for degree credit; "NC", work of such unsatisfactory quality that no credit is given. Post-baccalaureate students may not elect to take any course offered as available for "graduate" credit under the Pass Option policy.

A mark of "I", (incomplete because of illness or other reason beyond control of student) at the end of semester, carries no credit. Unless such a course is satisfactorily completed within six months of the last day of class for the course, the grade for the course becomes "NC". It is the responsibility of the student to make arrangements to complete course requirements for removal of the "I".

In computation of grade point averages, the following quality point values are used:

A - 4 quality points	C - 2 quality points
B - 3 quality points	D - 1 quality point



Students may repeat any course only once where credit has been earned or a mark of "NC" has been awarded. When the course is repeated, the student will receive the credits for the course counted once and the higher of the two grades. Upon completion of the repeated course, a Change of Grade form must be submitted to the Registrar by the student. The lower of the marks earned is not retained on the student's permanent record.

#### **REQUIREMENTS FOR THE MASTER'S DEGREE**

1. Satisfactory completion of all undergraduate requirement listed as prerequisites for the degree.
2. The filing of a Program of Study with the Dean of Graduate Studies.
3. Advancement to Degree Candidacy.
4. A 3.00 average in all graduate work at this college.
5. Satisfactory completion of the Comprehensive Examination if required by the program in which the degree is earned.
6. Satisfactory completion of the Thesis and oral examination if the Thesis Option is selected.
7. The filing of the Diploma Card in the Graduate Division.

#### **TIME LIMITATION**

All requirements for the Master's degree are to be completed within a seven-year period. The scheduled time is determined from the date of the first course in the degree program at this college, or the date of any course allowed as transfer credits, whichever is earlier.

#### **CONTINUOUS ENROLLMENT**

Each student is expected to register for courses on a regular basis. Should there be a lapse of two academic years without courses being taken, the student's records will be inactivated. Once a student has become "Inactive", it is necessary to be reactivated under current policies.

#### **PROGRAM OF STUDY**

A Program of Study should be planned within the semester that the student is granted Graduate Student standing. The Program is to be completed in consultation with an adviser, and must be drawn up on forms provided by the appropriate graduate coordinator. Revision of the Program of Study may be accomplished only with the adviser's approval. The Program must be planned prior to Advancement to Degree Candidacy. Any courses taken prior to the planning of the Program of Study are subject to the approval of the appropriate graduate coordinator.

#### **ADVANCEMENT TO DEGREE CANDIDACY**

All students in programs leading to the Master's degree must attain Advancement to Degree Candidacy. An application for Advancement to Degree Candidacy may be made by Graduate Students after nine hours of graduate courses have been completed. The following requirements govern eligibility for Advancement to Degree Candidacy:

1. Six credits in 500-level and 600-level courses.
2. A 3.00 average in all graduate work at this college.
3. Successful completion of the Advancement to Degree Candidacy Examination.
4. The filing of a Program of Study with the Dean of Graduate Studies.
5. Completion of all undergraduate requirements.

All students are urged to meet the requirements of and to make application for Advancement to Degree Candidacy within the nine to fifteen hour framework. Advancement to Degree Candidacy must be attained at least one semester prior to the semester in which the student desires graduation.

## **ADVANCEMENT TO DEGREE CANDIDACY EXAMINATION**

Each student must successfully pass a written examination prior to Advancement to Degree Candidacy. Application for the examination must be made prior to the date established as the deadline for applying as stated in the calendar at the front of this bulletin. Should the student not take the examination or have to repeat it, the application must again be submitted during the semester in which the examination is desired.

In the program leading to the Master's degree in Biology, the examination requirement may be satisfied by completing 14.581, "Recent Advances in Biology," with the grade of "B" or higher. The programs in Early Childhood Education, Elementary Education, and Secondary Education allow satisfaction of the examination requirement by completing 29.501, "Educational Ideas in Historical Perspective" with the grade of "B" or higher. The written Advancement to Degree Candidacy Examination is required in all cases where the grade of "A" or "B" is not attained when the course is first taken.

## **COMPREHENSIVE EXAMINATION**

It is the option of each program to require a final comprehensive examination. The final comprehensive examination may not be taken earlier than the term during which the student will complete his course work. The examination may be repeated only once. Application for the examination must be made prior to the date established as the deadline for applying as stated in the calendar at the front of this bulletin. Should the student not take the examination or have to repeat it, an application must again be submitted during the semester in which the examination is desired.

## **ACADEMIC PROBATION**

In order to remain in good standing, candidates for the Master's degree must maintain a 3.00 average. If the cumulative average falls below 3.00, the student will be placed on probation. If after completing nine more hours of work, his cumulative average remains below 3.00, he will be dropped from candidacy; otherwise, he will be restored to good standing. A student on probation will not be permitted to take comprehensive examination leading to any degree. Required courses in which the candidate earns a grade of "D" must be repeated since the grade does not confer graduate credit.

## **WORKSHOP AND INDEPENDENT STUDY LIMITATIONS**

In all degree programs, a limit of twelve semester hours total is placed on workshops, independent study, travel and study, and directed reading. No more than six semester hours may be taken in any single area.

## **COURSE LOAD**

A student who registers for nine graduate credit hours is considered full time. One who takes fewer hours is designated a part-time student. The maximum load for full-time students is twelve credit hours.

## **THESIS PROCEDURE**

Students intending to write a thesis in partial fulfillment of the requirements for the degree should obtain the brochure "Thesis Procedure" from the Graduate Office. The following requirements must be met prior to approval of registration for the appropriate Thesis course:

1. The student declares in writing to the Dean of Graduate Studies his intent to complete the Thesis requirement.
2. The student meets with the Graduate Coordinator to select a Research Adviser.
3. A Thesis topic is agreed upon.
4. Suggested members of the Thesis Committee are submitted by the department to the Dean of Graduate Studies.

5. The Thesis Committee is appointed by the Dean of Graduate Studies.
6. The student prepares a Thesis Outline and submits copies to all members of the Thesis Committee.
7. The student and his adviser schedule a meeting of the full Committee and the student orally presents and defends his Outline.
8. The accepted Outline is filed with the office of the Dean of Graduate Studies.
9. The student begins his research.
10. At the next registration for courses, the student *must* register for the appropriate Thesis course.

## TRANSFER CREDIT



The following regulations govern the transfer of credits from other regionally accredited colleges:

1. A maximum of six transfer credits for graduate courses taken prior to enrollment at Towson State College is allowed if the student is initially admitted to Graduate Student Standing at this college and if the courses are relevant to the student's major.
2. Transfer credit after a student has attained Graduate Student Standing may be permitted if the student applies in writing to the Dean of Graduate Studies for permission prior to taking a course. Normally, approval will be given only for courses which are not offered by Towson State College during the period of the student's attendance.
  - a. A maximum of twelve transfer credits may be allowed for graduate work satisfactorily completed at the State Colleges: Bowie, Coppin, Frostburg, Morgan, and Salisbury.
  - b. A maximum of six transfer credits may be allowed for graduate courses completed at accredited colleges or universities not listed above. Permission for these credits can be granted only if the student has not transferred courses taken prior to entrance at Towson State College.
3. The total accumulation of transfer credits from all courses listed in 1 and 2a above may not exceed twelve.
4. All transfer credits must be completed with a grade of "B" or higher and must remain within the total span of seven years allowed for completion of degree requirements.

## APPLICATION FOR GRADUATION

Each student must make application for graduation by submitting the Graduate Division Diploma Card and paying the appropriate graduation fee. The diploma card must be submitted by the published deadline date in the Academic Calendar on page 4 of this bulletin. Students submitting the Diploma Card late must delay graduation for one semester.

# Graduate Programs

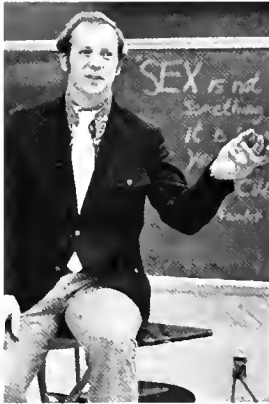
## PROGRAMS AND PURPOSES

The Master of Arts degree in Psychology and Geography, and the Master of Science degrees in Audiovisual Communications, Biology, and Speech Pathology and Audiology are intended to develop further specific knowledge in the respective fields. It is the intent of these programs to enable students to meet their needs through the flexibility within each program. The Master of Arts degree in General Studies is intended for the student wishing an interdisciplinary degree and is designed to meet individual needs.

The programs leading to the Master of Education degree have been developed primarily to help teachers increase their competency in the following general areas:

- Art Education
- Early Childhood Education
- Elementary Education
- Music Education
- Reading
- Secondary Education

## THE M.A. IN GENERAL STUDIES



The Master of Arts degree in General Studies is an interdisciplinary degree designed to meet the individual student's needs. The degree program will provide the student seeking an advanced degree with the opportunity to extend knowledge and to develop competencies in areas of specific interest. The intent of the program is to insure breadth; however, the student wishing a disciplinary orientation can develop a program of study with a maximum of eighteen hours in the desired discipline. The program is offered by Towson State College in cooperation with Morgan State College.

## Requirements:

1. Undergraduate Requirements  
Bachelor's degree from an accredited college or university.
2. Course Requirements for the Degree. (minimum 36 hours)
  - a. Required Courses
    - 1) Gest 33.501 Introductory Seminar in General Studies (3 hrs.) This course must be taken within the first nine hours of degree work.
    - 2) Gest 33.502 Culminating Seminar in General Studies (3 hrs.) This course must be taken during the last semester of the degree program.
  - b. Planned Elective Courses (30 hrs.)
    - 1) The elective credits must be approved for the student's Program of Study in advance of enrollment for the courses.
    - 2) At least fifteen of the elective credits must be taken at the 500 and/or 600 levels.
    - 3) Twelve hours must be taken in the Graduate School at Morgan State College.
    - 4) No more than eighteen of the elective credits may be in any single discipline.

## THE M.A. IN GEOGRAPHY

The Master of Arts degree program in Geography consists of optional plans that are designed to help the student prepare for further graduate study, for a professional career which requires completion of the master's degree, and for teaching at elementary, secondary, or community college levels with a master's degree competency in geography. The program is organized to provide qualified students with a broad mastery of the field through a balanced curriculum of systematic and regional studies and research experience. Emphasis is placed on individual study, research, and the applications of approaches and techniques used in geography in the analysis of problems concerned with physical and cultural phenomena.

Students who complete the Master of Arts degree in Geography should develop a better understanding of the nature of geography and its interdisciplinary relationships. They should measurably improve their backgrounds for teaching or for entering a number of career areas, including various federal, state, and county agencies, and private industry.

## Requirements:

### 1. Undergraduate Requirements

- a. At least an undergraduate minor in Geography or the equivalent
- b. At least a "B" grade average in the geography courses presented for admission
- c. Acceptable achievement on the Graduate Record Examination in Geography

### 2. Requirements for the Degree

Fulfillment of all requirements will be at the discretion of the department. A program of study will be prepared by each student in consultation with his adviser. The program of study will be presented to the Graduate Committee of the Department of Geography and Environmental Planning for approval. Students may elect one of the following two plans of study:

#### a. Plan A. Master of Arts with Thesis

- 1) Completion of a total of at least 30 semester hours of prescribed and elective course work in geography, 6 of which will be met by a thesis.
- 2) At least 15 semester hours in geography must be earned at the 500-600 levels.
- 3) A thesis in geography which demonstrates the student's ability to do independent research.
- 4) Presentation of evidence of at least a fourth semester of college level competency in one modern language OR proficiency in statistics or computer science.
- 5) Course Requirements for the Degree
  - (1) Geog. 34.481 (3 hrs.)
  - (2) Geog. 34.521 (3 hrs.)
  - (3) Geog. 34.697 Research (Thesis) (6 hrs.)
  - (4) Electives (planned with Adviser) (18 hrs.)

#### b. Plan B. Master of Arts without Thesis

- 1) Completion of at least 36 semester hours of prescribed and elective course work in geography.
- 2) At least 18 semester hours in geography must be earned at the 500 - 600 levels.
- 3) Presentation of evidence of at least a fourth semester of college level competency in one modern language OR proficiency in statistics or computer science.
- 4) Course Requirements
  - (1) Geog. 34.481 (3 hrs.)
  - (2) Geog. 34.671 (3 hrs.)
  - (3) Electives (planned with Adviser) (30 hrs.)

### 3. Advancement to Degree Candidacy Examination.

An examination is required for Advancement to Degree Candidacy. The examination may be taken after completion of 9 semester hours (6 hours of which must be at the 500 and 600 levels) and may not be taken later than the semester following the one in which 15 hours are completed. Part of the examination may be conducted orally.

### 4. Comprehensive Examination

The department maintains the prerogative to require a Comprehensive Examination at the conclusion of all other degree requirements.



## THE M.A. IN PSYCHOLOGY

The Master of Arts degree program in Psychology offers the student an opportunity of in-depth specialization in four specific psychological areas. These areas are Clinical Psychology, Counseling, General Psychology and School Psychology. Each of these is described in detail with reference to objectives and requirements.

## CLINICAL PSYCHOLOGY

The area of Clinical Psychology aims primarily at training a core of M.A. level psychologists for employment in state and other non-profit organizations. These psychologists will be able to provide services to patients and clients under the direct and continuing supervision of psychologists certified by the State Board of Examiners of Psychologists and/or medical staff. The program also seeks to prepare students for further graduate study in psychology.

### Requirements:

#### 1. Undergraduate Requirements in Psychology (total: 24 hours)

##### a. Courses in the following areas:

- 1) General Psychology (3 hrs.)
- 2) Child Psychology (3 hrs.)
- 3) Adolescent Psychology (3 hrs.)
- 4) Abnormal Psychology (3 hrs.)
- 5) Personality (3 hrs.)
- 6) Behavioral Statistics (3 hrs.)
- 7) Tests and Measurements (3 hrs.)
- 8) Experimental Psychology OR Learning (3 hrs.)

NOTE: These courses cannot be used to meet part of the formal elective requirements for the degree as defined in Paragraph 2 below. These courses must be completed prior to initiation of course work for the degree.

##### b. Acceptable achievement on the Miller Analogies

##### c. Acceptable performance on the Aptitude Test of the Graduate Record Examination

##### d. A satisfactory interview with the Coordinator of the School Clinical Psychology Areas.

##### e. A cumulative average of 3.0 in psychology

#### 2. Course Requirements for the Degree. They may be met by completing either one of the following plans of study:

##### a. Plan A: Master of Arts Without Thesis (Minimum of 39 hours)

##### 1) Required Courses

- \*a) Psyc 70.531 Advanced Abnormal Psychology (3 hrs.)
- \*b) Psyc 70.520 Individual Intelligence Testing (3 hrs.)
- \*c) Psyc 70.591 Projective Techniques I (3 hrs.)
- d) Psyc 70.592 Projective Techniques II (3 hrs.)
- e) Psyc 70.565 Advanced Psychotherapy I (3 hrs.)
- f) Psyc 70.566 Advanced Psychotherapy II (3 hrs.)
- g) Psyc 70.553 Issues and Research in School/Clinical Psychology (3 hrs.)
- h) Psyc 70.551 Techniques of Group Intervention (3 hrs.)
- i) Psyc 70.690 Seminar in School/Clinical Psychology (3 hrs.)
- j) Psyc 70.651 Practicum in School/Clinical Psychology (3 hrs.)
- k) Psyc 70.652 Internship in School/Clinical Psychology (3 hrs.)

##### 2) Electives. Six hours of courses are elected by the student from within or outside the field of psychology to complement his program of study. Such courses must have prior written consent of the area Coordinator:

##### b. Plan B: Master of Arts with Thesis (Minimum of 36 hours.)

##### 1) Required courses are identical to Plan A

##### 2) One elective is dropped to permit registration for the Thesis course, Psych 70.699 (3 hrs.)

##### c. A final Comprehensive Examination is required

\*Courses to be completed or in progress prior to Advancement to Candidacy Examination

\*\*Please note: The Internship carries with it a residency requirement of one semester. The student must be available for placement in a school or clinic.



## COUNSELING



The purpose of the area of Counseling is to develop professionally responsible individuals who are capable of facilitating a counselee's personal growth and development. He is trained to help his client to explore his educational, vocational and personal goals and seeks to facilitate the counselee's development of a meaningful course of action in these areas. The training program requires an understanding of psychological principles and reflects professional practices and responsibilities consistent with current research findings. The student has the opportunity to select a concentration in Counseling from:

- a. Elementary School Counseling
- b. Secondary School Counseling
- c. Career Counseling
- d. Community Counseling
- e. Rehabilitation Counseling

### Requirements:

1. Undergraduate Requirements in Psychology (total: 9 hours) The following courses or their equivalents are required of all candidates for admission to the program:
  - a) General Psychology (3 hrs.)
  - b) Behavioral Statistics (3 hrs.)
  - c) Introduction to Tests and Measurements (3 hrs.)
2. Additional Undergraduate Requirements in Psychology (3 hrs.)
  - a) For students applying for Elementary School Counseling Concentration: Child Psychology (3 hrs.)
  - b) For students applying for Secondary School Counseling Concentration: Adolescent Psychology (3 hrs.)
  - c) For students applying for Career Counseling Concentration: Child or Developmental Psychology (3 hrs.)
  - d) For students applying for Community Counseling Concentration and Rehabilitation Counseling Concentration: Abnormal Psychology (3 hrs.)
3. Course Requirements for the Degree (Minimum 39 hours)
  - a) Required courses for all candidates (12 hrs.)
    - 1) Psyc 70.515 Introduction to Research Methods in Counseling (3 hrs.)
    - 2) Psyc 70.425 Introduction to the Helping Relationship (3 hrs.)
    - 3) Psyc 70.430 Systems and Techniques of Counseling Practice (3 hrs.)
    - 4) Psyc 70.621 Group Techniques in Counseling (3 hrs.)
  - b) For students whose goals are related to Elementary School Counseling the following courses are required:
    - 1) Psyc 70.511 Developmental Psychology (3 hrs.)
    - 2) Psyc 70.605 Principles of Guidance (3 hrs.)
    - 3) Psyc 70.611 Analysis of the Individual (3 hrs.)
    - 4) Psyc 70.607 Occupational Information (3 hrs.)
    - 5) Psyc 70.630 Counseling the Elementary School Child (3 hrs.)
    - 6) Psyc 70.645 Counseling Practicum I (3 hrs.)
    - 7) Psyc 70.646 Counseling Practicum II (3 hrs.)
    - 8) Electives (6 hrs.)
  - b) For students whose goals are related to Secondary School Counseling, the following courses are required:
    - 1) Psyc 70.361 Abnormal Psychology (3 hrs.)
    - 2) Psyc 70.511 Developmental Psychology (3 hrs.)
    - 3) Psyc 70.605 Principles of Guidance (3 hrs.)



- 4) Psyc 70.611 Analysis of the Individual (3 hrs.)
- 5) Psyc 70.607 Occupational Information (3 hrs.)
- 6) Psyc 70.627 Use of Tests in Counseling (3 hrs.)
- 7) Psyc 70.645 Counseling Practicum I (3 hrs.)
- 8) Psyc 70.646 Counseling Practicum II (3 hrs.)
- 9) Psyc 70.--- Elective (3 hrs.)

c) For students whose goals are related to Career Counseling, the following courses are required:

- 1) Psyc 70.605 Principles of Guidance (3 hrs.)
- 2) Psyc 70.611 Analysis of the Individual (3 hrs.)
- 3) Psyc 70.606 Introduction to Career Development (3 hrs.)
- 4) Psyc 70.607 Occupational Information (3 hrs.)
- 5) Psyc 70.608 Media in Career Education (3 hrs.)
- 6) Psyc 70.627 Use of Tests in Counseling (3 hrs.)
- 7) Psyc 70.645 Counseling Practicum I (3 hrs.)
- 8) Psyc 70.646 Counseling Practicum II (3 hrs.)
- 9) Psyc 70.--- Elective (3 hrs.)



d) For students whose goals are related to Community Counseling, the following courses are required:

- 1) 70.511 Developmental Psychology (3 hrs.) or  
70.321 Adolescent Psychology (3 hrs.)
- 2) Psyc 70.627 Use of Tests in Counseling (3 hrs.)
- 3) Psyc 70.521 Advanced Abnormal Psychology (3 hrs.)
- 4) Psyc 70.645 Counseling Practicum I (3 hrs.)
- 5) Psyc 70.646 Counseling Practicum II (3 hrs.)
- 6) Psyc 70.--- Internship in Community Counseling (3 hrs.)
- 7) Psyc 70.--- Electives (6 hrs.)
- 8) Psyc 70.--- Elective or Thesis (3 hrs.)

e) For students whose goals are related to Rehabilitation Counseling, the following courses are required (3 hrs.)

- 1) Psyc 70.370 Foundations of Rehabilitation Counseling (3 hrs.)
- 2) Psyc 70.--- Psycho-Social Aspects of Disabilities (3 hrs.)
- 3) Psyc 70.--- Medical Aspects of Disabilities (3 hrs.)
- 4) Psyc 70.627 Use of Tests in Counseling (3 hrs.)
- 5) Psyc 70.607 Occupational Information (3 hrs.)
- 6) Psyc 70.--- Clinical Practicum in Rehabilitation Counseling (3 hrs.)
- 7) Psyc 70.--- Internship in Rehabilitation Counseling (3 hrs.)
- 8) Psyc 70.--- Elective (3 hrs.)
- 9) Psyc 70.--- Elective or Thesis (3 hrs.)

4. A final comprehensive examination is required.

## GENERAL PSYCHOLOGY

The purpose of the General Psychology area has as its premise a thorough training in the basic historical, methodological, theoretical, and conceptual bases of psychology. The student obtains a firm background in psychology by taking courses within the Core Program. In addition, a meaningful, individualized program of electives may be pursued by taking courses in a number of different areas including experimental, college teaching, clinical, and counseling.

Students who complete this program will be prepared to pursue more advanced degrees in psychology in any specialty area or compete adequately in the job market for such positions as psychometrician, laboratory technician, experimental designer or community college teacher.





## Requirements:

1. Undergraduate Requirements
  - a. Courses in the following areas:
    - 1) Statistics (3 hrs.)
    - 2) Experimental Psychology (3 hrs.)
    - 3) Learning (3 hrs.)
  - b. The Graduate Record Examination (Aptitude and Advanced). No fixed score is required for admission however.
2. Course Requirements for the Degree (39 hrs.). They may be met by completing the following:
  - a. Core Program (22 hrs.)
    - 1) Psyc 70.575 Proseminar I (3 hrs.)
    - 2) Psyc 70.576 Proseminar II (3 hrs.)
    - 3) Psyc 70.587 Advanced Experimental Design I (3 hrs.)
    - 4) Psyc 70.588 Advanced Experimental Design II or 70.589 Multivariate Methods (3 hrs.)
    - 5) Psyc 70.573 Advanced Experimental Psychology I or Psyc 70.574 Advanced Experimental Psychology II (4 hrs.)
    - 6) Psyc 70.581 History & Systems (3 hrs.)
    - 7) Psyc 70.577 Learning (3 hrs.)
  - b. Elective Courses (17 hrs.)
    - 1) Student may choose any graduate elective at the 300-600 levels.
    - 2) Student may elect to complete a thesis (3 hrs.). A more appropriate integrative experience may be substituted for the thesis dependent upon the students career goals.
3. Advancement to Degree Candidacy Examination
 

An examination is required for advancement to degree candidacy. The examination is taken toward the end of the semester in which 15 hours of graduate work is completed and includes any relevant course work taken up to that point.

## SCHOOL PSYCHOLOGY

The area of School Psychology aims primarily at preparing qualified students for certification as school psychologists in the State of Maryland. Because of the broad application of these skills, the students are also typically prepared to serve as MA level psychologists in a variety of non-profit organizations. The program also seeks to prepare students for advanced graduate study in psychology.



1. Undergraduate Requirements in Psychology (total: 24 hours)
  - a. Courses in the following areas:
    - 1) General Psychology (3 hrs.)
    - 2) Child Psychology (3 hrs.)
    - 3) Adolescent Psychology (3 hrs.)
    - 4) Abnormal Psychology (3 hrs.)
    - 5) Personality (3 hrs.)
    - 6) Behavioral Statistics (3 hrs.)
    - 7) Tests and Measurements (3 hrs.)
    - 8) Experimental Psychology OR Learning (3 hrs.)

NOTE: These courses cannot be used to meet part of the formal elective requirements for the degree as defined in Paragraph 2 below. These courses must be completed prior to initiation of course work for the degree.

- b. Acceptable achievement on the Miller Analogies
- c. Acceptable performance on the Aptitude Test of the Graduate Record Examination



- d. A satisfactory interview with the Coordinator of the School/Clinical Psychology areas.
- e. A cumulative average of 3.0 in psychology
2. Course Requirements for the Degree. They may be met by completing either one of the following two plans of study:
  - a. Plan A: Master of Arts Without Thesis (Minimum of 39 hours)
    - 1) Required courses
      - \*a) Psyc 70.531 Advanced Abnormal Psychology (3 hrs.)
      - \*b) Psyc 70.520 Individual Intelligence Testing (3 hrs.)
      - \*c) Psyc 70.591 Projective Techniques I (3 hrs.)
      - d) Psyc 70.592 Projective Techniques II (3 hrs.)
      - e) Psyc 70.511 Developmental Psychology (3 hrs.)
      - f) Psyc 70.511 Developmental Psychology (3 hrs.)
      - g) Psyc 70.553 Issues & Research in School/Clinical Psychology (3 hrs.)
      - h) Psyc 70.551 Techniques of Group Intervention (3 hrs.)
      - i) Psyc 70.690 Seminar in School/Clinical Psychology (3 hrs.)
      - j) Psyc 70.651 Practicum in School/Clinical Psychology (3 hrs.)
      - k) Psyc 70.652 Internship in School/Clinical Psychology (3 hrs.)
    - 2) Electives. Six hours of courses are elected by the student from within or outside the field of psychology to complement his program of study. Such courses must have prior written consent of the area coordinator.
  - b. Plan B: Master of Arts With Thesis (Minimum of 36 hours)
    - 1) Required courses are identical to Plan A
    - 2) One elective is dropped to permit registration for the Thesis course, Psych 70.699 (3 hrs.)
  - c. A final comprehensive examination is required.

\*courses to be completed or in progress prior to Advancement to Degree Candidacy Examination

\*\*please note: The internship carries with it a residency requirement of one semester. The student must be available for placement in a school or clinic.

## THE M.S. IN AUDIOVISUAL COMMUNICATIONS

The Master of Science degree program in Audiovisual Communications is designed to meet the varying needs of graduate students, especially teachers and administrators who have had limited contact and experience with this rapidly developing field of instructional communications and technology. The degree program will provide the student seeking an advanced degree with the opportunity to develop competencies and leadership.

### Requirements:

1. Undergraduate Requirements
  - a. Certification as a public school teacher OR
  - b. Successful completion of all requirements for an undergraduate major in an academic field
2. Applicants will need to obtain satisfactory ratings in all admissions devices including references and an interview with the coordinator following departmental receipt of all admission credentials from the Graduate Office.
3. AVCO reference forms should be obtained from the Graduate Office along with other application material(s) for admission to graduate studies. The interview appointment will be initiated by the Department.

4. The AVCO Advancement to Degree Candidacy Examination may not be taken until a minimum of twelve (12) semester credits of AVCO courses have been completed.
5. Course Requirements for the Degree
  - a. Plan A. Master of Science in Audiovisual Communications with Thesis. (Minimum 30 hours)
    - 1) Required Courses (21 hours)
      - a) Avco 13.485 Seminar Workshop in Educational Technology (3 hrs.)
      - b) Avco 13.563 Applied Psychology of Learning (3 hrs.)
      - c) Avco 13.695 Theory and Research in Audiovisual Communications (3 hrs.)
      - d) Avco 13.699 Master's Thesis in Audiovisual Communications (6 hrs.)
      - e) Six hours selected from:
        - Avco 13.573 Instructional Facilities Design (3 hrs.)
        - Avco 13.501 Organization, Administration, and Supervision of Audiovisual Communications Programs (3 hrs.)
        - Avco 13.689 Internship in Audiovisual Communications (3-6 hrs.)
    - 2) Elective Courses (9 hours)
      - a) The elective courses may all be in Audiovisual Communications or may be in a planned program outside Audiovisual Communications.
      - b) Six hours must be selected from courses numbered 500-699.
  - b. Plan B. Master of Science in Audiovisual Communications without Thesis. (Minimum 33 hours)
    - 1) Required Courses (15 hours)
      - a) Avco 13.485 Seminar Workshop in Educational Technology (3 hrs.)
      - b) Avco 13.563 Applied Psychology of Learning (3 hrs.)
      - c) Avco 13.695 Theory and Research in Audiovisual Communications (3 hrs.)
      - d) Six hours selected from:
        - Avco 13.573 Instructional Facilities Design (3 hrs.)
        - Avco 13.501 Organization, Administration, and Supervision of Audiovisual Communications Programs (3 hrs.)
        - Avco 13.689 Internship in Audiovisual Communications (3-6 hrs.)
    - 2) Elective Courses (18 hours)
      - a) The elective courses may all be in Audiovisual Communications or may be in a planned program which contains a maximum of twelve hours outside Audiovisual Communications.
      - b) Six hours must be selected from courses numbered 500-699.



## THE M.S. IN BIOLOGY

The Master of Science Degree Program in Biology is designed to provide greater knowledge and understanding of biology and to help the student develop a proficiency in independent thought, inquiry, and research. The degree program will provide the necessary background and experience for those desiring to teach in the increasing number of junior and community colleges, those whose employment requires an advanced degree in biology, and those who plan further study for the Ph.D. The program will enable secondary school teachers to extend their knowledge and increase their competence in cultivating the spirit of scientific inquiry through their own participation in research.

## Requirements:

1. Supplemental application must be filed for admission to the Master of Science degree program in Biology.
2. An interview with members of the Biological Sciences faculty should be obtained.
3. Three letters of recommendation from persons familiar with the student's scientific work and aptitude must be sent to the Graduate Office. At least one of these letters should be from a former instructor in the student's undergraduate major. The student should check with the Graduate Office to ascertain that the letters have been received.
4. Undergraduate Requirements
  - a. A thorough preparation in general biology.
  - b. Courses in botany, zoology, and genetics as well as allied courses in general and organic chemistry, physics, and mathematics.
5. Requirements for the Degree
  - a. Scores on the Aptitude and Advanced Tests of the Graduate Record Examination are required prior to Advancement to Degree Candidacy
  - b. Plan A. Master of Science with Thesis (Minimum 30 hours)

At least 18 hours must be at the 500-600 levels. A Thesis based on laboratory and/or field research is required. The student must successfully complete the Advancement to Degree Candidacy Examination. This requirement is fulfilled by completion of Biol. 14.581, Recent Advances in Biology, with the grade of "A" or "B". The final examination is an oral defense of the Thesis.

    - 1) Required Courses (11 hours)
      - a) Biol 14.581 Recent Advances in Biology (4 hrs.)
      - b) Biol 14.697 Graduate Seminar (1 hr.)
      - c) Biol 14.699 Thesis (6 hrs.)
    - 2) Elective Courses (19 hours)
      - a) These are to be selected from courses approved by the Student's Graduate Adviser
      - b) Upon approval of the Graduate Adviser, a maximum of 6 hours in allied courses from other departments may be applied toward degree requirements.
  - c. Plan B. Master of Science without Thesis (Minimum 36 hours)

At least 18 hours must be at 500-600 levels. A research paper which represents the quality, but not the range, of a thesis is required. The paper is based on the research project conducted in Biol 14.601. The student must successfully complete the Advancement to Degree Candidacy Examination. This requirement is fulfilled by completion of Biol 14.581, Recent Advances in Biology, with the grade of "A" or "B".

    - 1) Required Courses (8 hrs.)
      - a) Biol 14.581 Recent Advances in Biology (4 hrs.)
      - b) Biol 14.601 Non-Thesis Graduate Research (3 hrs.)
      - c) Biol 14.697 Graduate Seminar (1 hr.)
    - 2) Elective Courses (28 hrs.)
      - a) These are to be chosen from courses approved by the Graduate Adviser.
      - b) Upon approval of the Graduate Adviser, a maximum of 6 hours in allied courses from other departments may be applied toward degree requirements.
6. Area of Concentration

In either Plan A or Plan B a student may, with the approval of the Graduate Advisor and the Biology Graduate Committee, choose an area of concentration which will be recorded on the transcript.



## THE M.S. IN SPEECH PATHOLOGY AND AUDIOLOGY

The Master of Science degree in Speech Pathology and Audiology is designed to provide pre-professionals in the field, e.g., those with a Bachelor's degree in Speech Pathology and Audiology, to meet the academic and clinic practice requirements of the national, state, and local speech and hearing associations. The Speech Pathology and Audiology Program will provide the student with an in-depth investigation of specific disorders of speech, hearing, and language; intensive study of normal speech and language development; development of appropriate therapeutic goals, procedures, and materials; and extensive clinical practice experience in on-campus and off-campus settings with a wide variety of clinical cases.

Students may elect to emphasize either the Speech Pathology Specialization or the Audiology Specialization. Applicants should indicate their area of emphasis on the application form.

Completion of the degree will prepare the individual to compete adequately for employment in public school, clinical, or hospital settings; or to pursue more advanced degrees in this field.

Individuals without an undergraduate degree in Speech Pathology and Audiology must complete 33 credits of undergraduate course prerequisites *prior* to applying for admissions into the Master of Science Degree program.

### Requirements:

1. Undergraduate Requirements
  - a. Bachelor's degree in Speech Pathology and Audiology OR
  - b. Successful completion of 33 hours of undergraduate coursework in Speech Pathology and Audiology including the following courses or their equivalents:
    - 1) 87.105 Speech and Language Development (3 hrs.)
    - 2) 87.241 Introduction to Audiology (3 hrs.)
    - 3) 84.310 Phonetics of American English (3 hrs.)
    - 4) 87.400 Anatomy and Physiology of Aud./Vocal Mechanisms (3 hrs.)
    - 5) 84.402 Hearing and Speech Science (3 hrs.)
    - 6) 87.302 Speech Pathology I (3 hrs.)
    - 7) 87.304 Speech Pathology II (3 hrs.)
    - 8) 87.306 Speech Pathology III (3 hrs.)
    - 9) 87.305 Stuttering (3 hrs.)
    - 10) 87.486 Clinical Observation and Techniques (3 hrs.)
    - 11) 87.487 Clinic Practice I (3 hrs.)
2. Three letters of recommendation from undergraduate instructors must be sent to the Graduate Office.
3. Course Requirements for the Degree:
  - a. SPEECH PATHOLOGY SPECIALIZATION
    - 1) Required courses in Speech Pathology (9 hours)
      - (a) 87.485 Voice and Articulation Seminar (3 hrs.)
      - (b) 87.505 Neuropathologies of Speech (3 hrs.)
      - (c) 87.513 Introduction to Research in Speech Pathology and Audiology (1 hr.)
      - (d) 87.645 Advanced Clinic Practice (2 hrs.)
    - 2) Required courses in Audiology: (6 hours)
      - (a) 87.407 Aural Habilitation OR  
87.461 Hearing Aid Selection (3 hrs.) AND
      - (b) 87.451 Audiological Management of the Exceptional Child (3 hrs.) OR  
87.521 Diagnosis of Disorders of the Auditory System (3 hrs.)
    - 3) Elective courses in Speech Pathology — 12 hours of upper division and graduate level course work in courses specifically dealing with speech and language.





## THE M. ED. IN ART EDUCATION

The Master of Education degree program in Art Education is structured to further an understanding of the creative process, with its educational implications, and to develop increased sensitivity to, and skill in the graphic and plastic arts. Students are encouraged to specialize in an area of expression so that they may develop greater understanding and professional competence.

### Requirements:

1. Undergraduate Requirements in Education and Art
  - a. Certification as a public school art teacher
  - OR
  - b. Courses in both Art and Education areas as follows (total: 32 hours):
    - 1) In Art (27 hours)
      - a) Fundamentals of Design (two and three dimensional) (6 hrs.)
      - b) Ceramics and Sculpture (6 hrs.)
      - c) Drawing, Painting and Graphic processes (some credit required in each area) (9 hrs.)
      - d) Art History (6 hrs.)
    - 2) In Education (5 hours)
      - a) Educational Psychology or Human Growth and Development (3 hrs.)
      - b) Methods of Teaching Art (2 hrs.)
2. Course Requirements for the Degree. They may be met by completing either one of the following two plans of study:
  - a. Plan A. Master of Education with Thesis (Minimum 30 hours)

- 4) Elective courses outside of Speech Pathology and Audiology — 9 hours of courses which relate to the student's field and his future ambitions; psychology, speech science, linguistics, etc.
- b. AUDIOLOGY SPECIALIZATION:
  - 1) Required courses in Audiology: (21 hours)
    - (a) 87.513 Introduction to Graduate Research Paper (1 hr.)
    - (b) 87.645 Advanced Clinic Practise (2 hrs.)
    - (c) 87.461 Hearing Aid Selection (3 hrs.)
    - (d) 87.441 Industrial and Environmental Audiology (3 hrs.)
    - (e) 87.521 Diagnosis of Disorders of the Auditory System (3 hrs.)
    - (f) 87.451 Audiological Management of the Exceptional Child (3 hrs.)
    - (g) 87.407 Aural Habilitation/Rehabilitation (3 hrs.)
    - (h) 87.531 Instrumentation and Calibration (3 hrs.)
  - 2) Required courses in Speech Pathology: (6 hours)
    - (a) 87.501 Language Disorders in Children
    - (b) Elective in Speech Pathology: articulation, voice cleft palate, stuttering, cerebral palsy, etc. (3 hrs.)
  - 3) Elective courses in Audiology: (0-3 hours)  
Audiology Seminar (topic varies each time it is offered)
  - 4) Elective courses outside of Speech Pathology and Audiology: 6-9 hours of courses which relate to the student's field and his future ambitions; psychology, speech science, linguistics, physics, etc.
4. Advancement to Degree Candidacy Examination: Students will schedule an examination which will be written and will be taken after successful completion of 9-15 hours of graduate study. The examination will consist of three essay questions in the student's major area of emphasis and one essay question in the student's minor area of emphasis.



## THE M. ED. IN EARLY CHILDHOOD EDUCATION

The Master of Education degree program in Early Childhood Education is structured to help teachers and others increase their competence for working in education programs for children ages birth through eight years. It is designed to prepare teachers, directors, and supervisors for various education programs for young children such as day care centers, public and private nursery schools, kindergartens, and primary schools.

### Requirements:

1. Undergraduate Requirements in Education
  - a. Certification as an early childhood education public school teacher  
OR
  - b. Certification as an elementary public school teacher plus six semester hours in Early Childhood Education at the undergraduate level  
OR
  - c. Courses in the following areas (total: 15 hours):
    - 1) General Psychology, Educational Psychology, or Psychology of Learning (3 hrs.)
    - 2) Child Psychology, Child Growth and Development, Human Growth and Development, or Personality (3 hrs.)
    - 3) Curriculum and Methods in Early Childhood Education (6 hrs.)
    - 4) Three hours chosen from the following areas:
      - a) History of Education
      - b) Foundations of Education
      - c) Philosophy of Education
      - d) Principles of Education
      - e) Sociology of Education

- 1) Required Courses (15 hours)
  - a) Edfs 29.501 Educational Ideas in Historical Perspective (3 hrs.)
  - b) Psyc 70.511 Developmental Psychology (3 hrs.)
  - c) Art 12.697 Art Education Seminar (3 hrs.)
  - d) Art 12.595 Research in Art and Art Education (3 hrs.)
  - e) Art 12.699 Master of Education Thesis (3 hrs.)
- 2) The Thesis requirement may be met in one of two ways:
  - a) By writing a standard thesis dealing with a selected problem in Art and Art Education.
  - b) By undertaking a creative project. The Department must approve the project proposal. It is expected that the student will exhibit the completed project and accompany it with a suitable paper defining its scope and philosophy.
- 3) Elective Courses (15 hours)
  - a) Courses numbered 500-699 should ordinarily be chosen, but a maximum of fifteen hours of work in courses numbered 300-499 may be taken with approval of the student's adviser.
  - b) Six hours may be taken in departments other than Art.
- b. Plan B. Master of Education without Thesis (Minimum 33 hours)
  - 1) Required Courses (12 hours)
    - a) Edfs 29.501 Educational Ideas in Historical Perspective (3 hrs.)
    - b) Psyc 70.511 Developmental Psychology (3 hrs.) (Formerly Human Growth & Development — Advanced)
    - c) Art 12.697 Art Education Seminar (3 hrs.)
    - d) Art 12.595 Research in Art and Art Education (3 hrs.)
  - 2) Elective Courses (21 hours)
    - a) Courses numbered 500-699 should ordinarily be chosen, but a maximum of fifteen hours of work in graduate level courses numbered 300-499 may be taken with approval of the student's adviser.
    - b) Six hours may be taken in departments other than Art.

NOTE: These courses cannot be used to meet part of the formal elective requirements for the degree as defined below.

2. Course Requirements for the Degree. They may be met by completing either one of the following two plans of study:

a. Plan A. Master of Education with Thesis (Minimum 30 hours)

1) Required Courses (12 hours)

- a) Edfs 29.501 Educational Ideas in Historical Perspective (3 hrs.)
- b) Edpm 29.691 Introduction to Research in Education (3 hrs.)
- c) Edpm 25.599 Master's Thesis in Early Childhood Education (3 hrs.)
- d) Psyc 70.511 Developmental Psychology (3 hrs.)

2) Elective Courses (18 hours)

a) Twelve hours must be earned in departments other than education. Fewer than twelve hours may be earned in departments other than education with approval of the Program Coordinator.

b) Selection of courses should be made with the advice and approval of the Program Coordinator. Each program of study is designed to meet the needs and interests of the individual student.

c) At least six hours must be selected from courses numbered 500-699.

b. Plan B. Master of Education without Thesis (Minimum 33 hours)

1) Required Courses (12 hours)

- a) Edfs 29.501 Educational Ideas in Historical Perspective (3 hrs.)
- b) Educ 25.573 Seminar in Early Childhood Education (3 hrs.)
- c) Edpm 29.691 Introduction to Research in Education (3 hrs.)
- d) Psyc 70.511 Developmental Psychology (3 hrs.)

2. Elective Courses (21 hours)

a) Twelve hours must be earned in departments other than education. Fewer than twelve hours may be earned in departments other than education with the approval of the Program Coordinator.

b) Selection of courses should be made with the advice and approval of the Program Coordinator. Each program of study is designed to meet the needs and interests of the individual student.

c) At least six hours must be selected from courses numbered 500-699.



## THE M. ED. IN ELEMENTARY EDUCATION

The Master of Education degree program in Elementary Education consists of required and elective courses combined into an individual plan which helps the student broaden and deepen his understandings, improve skills and insights related to elementary teaching, and pursue his particular professional goals. In required courses and experiences he is provided with opportunities to clarify philosophical and psychological bases of teaching-learning, to examine recent educational developments and to grow in the spirit and skills of inquiry, and to experience the value of sound interpersonal relations in his life experience.

The Graduate Program in Elementary Education seeks to evaluate and build upon the student's undergraduate program and his professional experience. In order to enable the in-service teacher to continue his progress



toward the achievement of his academic and professional goals, the Master of Education degree program in Elementary Education seeks to: assist the student in assessing his level of competency as a teacher and to build upon his educational and professional experience; work with the student in planning a program of study which will facilitate the achievement of individual goals; provide avenues through which the individual may continue to grow in understanding, involvement in, and appreciation of the emerging society; help the student to extend his teaching competencies to new levels of development; encourage a spirit of inquiry and to teach research skills that will be useful in continuing study; help the student acquire a deepening functional understanding of human growth and development; guide the student toward understanding his role as a facilitator of change within the educational enterprise.



## Requirements:

### 1. Prerequisite Requirements

- a. Certification as an elementary public school teacher  
OR

- b. Courses in the following areas (total: 12 hours):

- 1) Educational Psychology or Human Growth and Development (3 hrs.)
- 2) Organization and Curriculum of the Elementary School (6 hrs.)
- 3) Three hours chosen from the following areas:
  - a) History of Education
  - b) Foundations of Education
  - c) Philosophy of Education
  - d) Sociology of Education

NOTE: These courses cannot be used to meet part of the formal elective requirements for the degree as defined below.

### 2. Course Requirements for the Degree. They may be met by completing either one of the following two plans of study:

- a. Plan A. Master of Education with Thesis (Minimum 30 hours)

#### 1) Required Courses (12 hours)

- a) Edfs 29.501 Educational Ideas in Historical Perspective (3 hrs.)
- b) Edpm 29.691 Introduction to Research in Education (3 hrs.)
- c) Edpm 26.699 Master's Thesis in Elementary Education (3 hrs.)
- d) Psyc 70.511 Developmental Psychology (3 hrs.)

#### 2) Elective Courses (18 hours)

- a) After admission and prior to his first registration, the student must plan a Program of Study with his Adviser. This Program of Study is designed to meet the needs and interest of the individual student. It may be changed only with the consent of the Adviser.
- b) At least six hours must be selected from courses numbered 500-699.

- b. Plan B. Master of Education without Thesis (Minimum 33 hours)

#### 1) Required Courses (12 hours)

- a) Edfs 29.501 Educational Ideas in Historical Perspective (3 hrs.)
- b) Edpm 29.691 Introduction to Research in Education (3 hrs.)
- c) Educ 26.675 Seminar in Elementary Education (3 hrs.)
- d) Psyc 70.511 Developmental Psychology (3 hrs.)

#### 2) Elective Courses (21 hours)

- a) After admission and prior to his first registration, the student must plan a Program of Study with his Adviser. This Program of Study is designed to meet the needs and interests of the individual student. It may be changed only with the consent of the Adviser.

- b) At least six hours must be selected from courses numbered 500-699.

The Master of Education degree program in Reading is a program offered cooperatively by Towson State College and Morgan State College. It is designed to offer experiences that will improve the teaching of reading at all levels from kindergarten through college. Specifically, the program seeks to offer courses in reading for teachers and administrators who are interested in improving their knowledge of reading and to prepare reading clinicians to teach developmental, corrective, and remedial reading. Furthermore, the program is designed to prepare reading specialists who will be capable of filling leadership roles in reading improvement programs in schools and clinics.

## THE M. ED. IN READING

### Requirements:

1. Undergraduate Requirements in Education  
Bachelor's degree from accredited college or university
2. Course Requirements for the Degree (Minimum 33 hours)  
These requirements may be met by completing the following:
  - a. Required Reading Courses (12 hours)
 

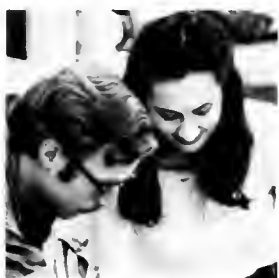
T indicates course offered at Towson State College  
M indicates course offered at Morgan State College

    - 1) T Educ 29.623 Methods and Materials in Teaching Reading in Elementary School (3 hrs.)
    - 2) T Educ 29.621 Reading Disabilities (3 hrs.)
    - 3) T Educ 29.625 Clinic Practicum in Reading (3 hrs.)
    - 4) T Educ 29.629 Seminar in Reading (3 hrs.)  
M Educ 29.507 Seminar in Reading (3 hrs.)
  - b. Additional Required Courses (12 hours)
    - 1) T Edfs 29.501 Educational Ideas in Historical Perspective (3 hrs.)
    - 2) T Psyc 70.511 Developmental Psychology (3 hrs.)
    - 3) T Psyc 70.411 Tests and Measurements in Education (3 hrs. or  
T Educ 29.414 Educational Tests and Measurements (3 hrs.)
    - 4) T Psyc 70.540 Advanced Mental Hygiene (3 hrs.)
  - c. Elective Courses (9 hours)
    - 1) M Engl 30.561 Introduction to Linguistics (3 hrs.)
    - 2) M Engl 30.590 Phonetics of American English (3 hrs.)
    - 3) T Psyc 70.605 Principles of Guidance (3 hrs.)
    - 4) T Edpm 29.417 Children's Literature or  
T Edpm 29.418 Literature for the Adolescent (3 hrs.)
    - 5) M Educ 26.501 Supervision and Curriculum in Reading (3 hrs.)
    - 6) T Educ 29.627 Evaluation of Reading Research (3 hrs.)
    - 7) M Educ 26.508 Teaching Reading in the Secondary School (3 hrs.)
    - 8) T Engl 30.430 History of the English Language (3 hrs.)
    - 9) T Educ 29.425 Corrective Reading (3 hrs.)



NOTE 1: The "Clinic Practicum in Reading" will be taught at Towson State College.

NOTE 2: The "Seminar in Reading" course will be one of the final courses in the sequence. This course will be taught at Morgan State College by professors from both Towson State College and Morgan State College. Consultants from other disciplines (medical, social, etc.) will also be invited to lecture to this advanced group.



## THE M. ED. IN MUSIC EDUCATION



NOTE 3: The elective courses may be taken at either Towson State College or Morgan State College with the permission of the director of the respective program.

NOTE 4: Other elective courses may be substituted with the permission of the director of the respective program.

The Master of Education degree program in Music Education incorporates the faculties, physical facilities, and course offerings of both Towson State College and Morgan State College. In addition to a beneficial interaction between the two institutions, this cooperative Master's Degree program offers the student broader and deeper understandings in realizing his professional goals. Most basic courses will be offered at both institutions; and, in such cases, textbooks and syllabi of comparable content will be used. However, certain required courses and certain elective courses will be offered on only one campus.

### Requirements:

1. Undergraduate Requirements in Education and Music
  - a. Hold a Bachelor's degree from an accredited college or university and certification as a public school music teacher

OR

Hold a Bachelor's degree from an accredited college or university with a minimum of 49 hours in undergraduate music courses

  - b. Grade point average of 3.0 or better in music courses
  - c. Be interviewed by the graduate coordinator
2. Course Requirements for the Degree. These may be met by completing one of the following two plans of study:
  - a. Plan A. Master of Education in Music Education with Thesis (Minimum 30 hours)
    - 1) Required Courses (12 hours)
 

T indicates course offered at Towson State College  
M indicates course offered at Morgan State College  
(consult Morgan State College Graduate Bulletin for course numbers)

      - a) T Edfs 29.501 Educational Ideas in Historical Perspective (3 hrs.)
      - b) T Psyc 70.511 Developmental Psychology (3 hrs.)
      - c) TM Muse 54.595 Research in Music and Music Education (3 hrs.)
      - d) TM Muse 54.501 Seminar in Current Trends in Music and Music Education (3 hrs.)
    - 2) Required Courses (3 hours) (Select one)
      - a) T Muse 54.562 Seminar in Choral Music (3 hrs.)
      - b) M Muse Seminar in Instrumental Music (3 hrs.)
    - 3) T Muse 54.699 Thesis (3 hrs.) or 54.697 Thesis Project (3 hrs.)  
This requirement may be met in one of the following ways:
      - a) By writing a thesis dealing with a selected problem in Music or Music Education (54.699)
      - b) By writing an original composition of major proportions and a paper concerning salient aspects of the composition (54.697)
      - c) By presenting a full recital on the graduate level (54.697)
    - 4) Elective Courses (12 hours) (Selected from three areas)



Area I (3-6 hours)

- a) T Muse 54.401 Music Prior to 1600 (3 hrs.)
- b) T Muse 54.402 Music of the Baroque Period (3 hrs.)
- c) T Muse 54.403 Music of the Classical Period (3 hrs.)
- d) T Muse 54.404 Music of the Romantic Period (3 hrs.)
- e) T Muse 54.405 Contemporary Music (3 hrs.)
- f) T Muse 54.411 Survey of Opera
- g) T Muse 54.413 Symphonic Literature (3 hrs.)
- h) T Muse 54.421 American Music (3 hrs.)
- i) M Muse Advanced Choral Literature (3 hrs.)
- j) M Muse Evolution of Afro-American Music (3 hrs.)
- k) M Muse Seminar in Non-Western Music (3 hrs.)

Area II (3-6 hours)

- a) TM Muse 54.435 Form and Analysis (3 hrs.)
- b) TM Muse 54.431 Advanced Choral and Instrumental Arranging (3 hrs.)
- c) T Muse 54.433 Advanced Theory (3 hrs.)
- d) T Muse 54.539 Music Composition (3 hrs.)
- e) T Muse 54.427 Jazz Arranging (3 hrs.)
- f) M Muse Advanced Orchestration (3 hrs.)
- g) M Muse Electronic Music (3 hrs.)

Area III (3-6 hours)

- a) FM Muse 54.407 Organization and Administration of Music Education (3 hrs.)
- b) TM Muse 54.471 through Muse 54.488 Private Instruction: Piano, Instrumental, Voice, Composition (1-3 hrs.)
- c) TM Muse 54.571 through Muse 53.588 Private Instruction: Piano, Instrumental, Voice, Composition (1-3 hrs.)
- d) T Muse 54.409-410 Teaching String Instruments (3 hrs.)
- e) T Muse 54.424 Advanced Woodwinds (3 hrs.)
- f) T Muse 54.425 Advanced Percussion (3 hrs.)
- g) T Muse 54.429 Jazz Improvisation (3 hrs.)
- h) M Muse Opera Workshop (3 hrs.)
- i) M Muse Musical Theatre (3 hrs.)
- j) M Muse Vocal Piano Pedagogy (3 hrs.)
- k) M Muse Piano Pedagogy (3 hrs.)
- l) M Muse Advanced Strings (3 hrs.)
- m) M Muse. Advanced Brass (3 hrs.)
- n) M Muse The Art of Accompanying (3 hrs.)
- b. Plan B. Master of Education in Music Education without Thesis (Minimum 33 hours plus a research paper in one of the seminar courses)
  - 1) Required Courses (15 hours)
    - Same as above, but does not require Muse 54.699 Thesis.
  - 2) Elective Courses (18 hours)
    - Area I As above (3-9 hours)
    - Area II As above (3-9 hours)
    - Area III As above (3-9 hours)

**THE M. E. D. IN  
SECONDARY  
EDUCATION**

34/Graduate Programs

The Master of Education degree program in Secondary Education is designed to help teachers develop competencies that will contribute to success in their educational responsibilities. The program provides advanced study in the general areas of education, psychology, and a teaching field.

**SPECIALIZATIONS  
OFFERED:  
EDUCATION  
ENGLISH  
FOREIGN LANGUAGE  
GEOGRAPHY  
HEALTH  
MATHEMATICS  
PHYSICAL  
EDUCATION  
READING**

Opportunities are given for the graduate student to pursue certain areas of interest through provisions for elective courses. In addition to currently offered specializations in teaching areas, others are being prepared. Contact the coordinator of the program for additional information.

## Requirements:

1. Undergraduate Requirements in Education
  - a. Certification as a secondary public school teacher  
OR
  - b. Courses in the following areas:
    - 1) Educational Psychology or Human Growth and Development
    - 2) Principles and Methods in Secondary Education
    - 3) Three hours chosen from the following areas:
      - a) History of Education
      - b) Foundations of Education
      - c) Philosophy of Education
  - c. Additional requirements for admission to specific areas of specialization.
    - 1) Specialization in English  
A Bachelor's Degree in English, or a minimum of 24 semester hours of English courses. At least 12 semester hours must be in upper-division English courses.
    - 2) Specialization in Geography  
A Bachelor's Degree with a major in geography, or a minor in geography, or the equivalent conferred by a recognized college or university.
    - 3) Specialization in Health
      - a) An Undergraduate Degree in Health Education or Health Science  
OR
      - b) A minimum of 24 hours of course work in Health Education and related sciences as determined by the Health Science Department at Towson State College
    - 4) Specialization in Mathematics  
A Bachelor's Degree with a major in mathematics, or a minor in mathematics, or the equivalent.
    - 5) Specialization in Foreign Language (French or Spanish)
      - a) An Undergraduate Degree in French or Spanish  
OR
      - b) A minimum of 24 semester hours of course work in French or Spanish. At least 12 semester hours must be in upper-division courses.
    - 6) Specialization in Physical Education
      - a) A minimum of 24 hours of course work in Physical Education
      - b) Approval by a screening committee composed of graduate faculty in Physical Education
2. Program options. Students must select either Program A (master of Education in secondary Education with a specialization in Education) or Program B (Master of Education in Secondary Education with a specialization in a Teaching Area).
3. Course Requirements for the Degree. They may be met by completing one of the plans in Program A or Program B.
  - a. Program A, Plan A (Specialization in Education with Thesis, minimum 30 hours)



**EDUCATION**



## ENGLISH

- 1) Required courses (12 hours)  
**Nine** hours in Education:  
 Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.699 Master's Thesis in Secondary Education (3 hrs.)  
**Three** Hours in Psychology:  
 Psyc 70.511 Developmental Psychology (3 hrs.)
- 2) Elective Courses (18 hours). At least six hours must be selected from courses numbered 500-699. Educational electives will be planned in terms of the needs and goals of the individual student and must be approved by the adviser.  
 Category A - 9 hours in Education  
 Category B - 6 hours in departments other than Education  
 Category C - 3 hours from any department, including Education
- b. Program A, Plan B (Specialization in Education without a Thesis, minimum 33 hours)
  - 1) **Nine** hours in Education  
 Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.681 Seminar in Secondary Education (3 hrs.)  
**Three** hours in Psychology  
 Psyc 70.511 Developmental Psychology (3 hrs.)
  - 2) Elective Courses (21 hours). At least six hours must be selected from courses numbered 500-699. Educational electives will be planned in terms of the needs and goals of the individual student and must be approved by the adviser.  
 Category A - 9 hours in Education  
 Category B - 6 hours in departments other than Education  
 Category C - 6 hours from any department, including Education
- c. Program B, Plan A (Specialization in English with Thesis, minimum 30 hours)
  - 1) Required courses (12 hours)  
**Nine** hours in Education  
 Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.699 Master's Thesis in Secondary Education (3 hrs.)  
**Three** hours in Psychology  
 Psyc 70.511 Developmental Psychology (3 hrs.)
  - 2) Elective courses (21 hours) At least six hours in English must be selected from courses numbered 500-699.  
**Three** hours in Education.  
**Eighteen** hours in English to be selected under advisement from approved courses.
- d. Program B, Plan B (Specialization in English without Thesis, minimum 36 hours)
  - 1) Required Courses (12 hours)  
**Nine** hours in Education  
 Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.681 Seminar in Secondary Education (3 hrs.)  
**Three** hours in Psychology  
 Psyc 70.511 Developmental Psychology (3 hrs.)
  - 2) Elective Courses (24 hours). At least six hours in English must be selected from courses numbered 500-699.  
**Six** hours in Education.  
**Eighteen** hours in English to be selected under advisement from approved courses.

**FOREIGN  
LANGUAGE**  
(French or  
Spanish)



- e. Program B, Plan A (Specialization in French or Spanish with Thesis, minimum 36 hours)
- 1) Required Courses (15 hours)
 

**Nine hours in Education.**  
 Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.699 Master's Thesis in Secondary Education (3 hrs.)

**Three hours in Psychology**  
 Psyc 70.511 Developmental Psychology (3 hrs.)

Three hours in French or Spanish  
 Fren 32.505 French Stylistics or  
 Span 82.505 Spanish Stylistics  
 (not required of native speakers of French or Spanish; non-native speakers may be exempted by examination. In such cases, another course, to be approved by the adviser will serve as a substitute.)
  - 2) Elective Courses (21 hours)  
 At least nine hours in French or Spanish must be selected from courses numbered 500-699.  
**Three hours in Education.**  
**Eighteen hours in French or Spanish** to be selected under advisement from approved courses.
- f. Program B, Plan B (Specialization in French or Spanish without Thesis, minimum 39 hours)
- 1) Required Courses (15 hours)  
 Same as Program B, Plan A above
  - 2) Elective Courses (24 hours)  
 At least six hours in French or Spanish must be selected from courses numbered 500-699.  
**Six hours in Education.**  
**Eighteen hours in French or Spanish** to be selected under advisement from approved courses.

**GEOGRAPHY**



- g. Program B, Plan A (Specialization in Geography with Thesis, minimum 33 hours)
- 1) Required courses (12 hours)
 

Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.699 Master's Thesis in Secondary Education (3 hrs.)

**Three hours in Psychology**  
 Psyc 70.511 Developmental Psychology (3 hrs.)
  - 2) Elective Courses (21 hours). At least six hours in Geography must be selected from courses numbered 500-699. Individual programs of study will be prepared by the Geography Adviser in close cooperation with the Coordinator of Secondary Education.  
**Three hours in Education.**  
**Eighteen hours in Geography.**
- h. Program B, Plan B (Specialization in Geography without Thesis, minimum 36 hours)
- 1) Required courses (12 hours)
 

**Nine hours in Education**  
 Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.681 Seminar in Secondary Education (3 hrs.)

**Three hours in Psychology**  
 Psyc 70.511 Developmental Psychology (3 hrs.)
  - 2) Elective Courses (24 hours). At least six hours in Geography must be selected from courses numbered 500-699. Individual programs of study will be prepared by the Geography Adviser in close cooperation with the Coordinator of Secondary Education.

## HEALTH EDUCATION



## MATHEMATICS

- Six** hours in Education.  
**Eighteen** hours in Geography.
- i. Program B, Plan A (Specialization in Health Education with Thesis, minimum 33 hours)
- 1) Required courses (12 hours)
 

**Nine** hours in Education  
 Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.699 Master's Thesis in Secondary Education (3 hrs.)

**Three** hours in Psychology  
 Psyc 70.511 Developmental Psychology (3 hrs.)
  - 2) Elective Courses (21 hours). At least six hours in Health Education must be selected from courses numbered 500-699.
 

**Three** hours in Education.  
**Eighteen** hours in Health Education to be selected under advisement from the following courses:  
 Heal 38.401 Sex Education and Family Living (3 hrs.)  
 Heal 38.402 Health Seminar (3 hrs.)  
 Heal 38.403 Health Education Curriculum (3 hrs.)  
 Heal 38.405 Drugs in Our Culture (3 hrs.)  
 Heal 38.451 Ecological Aspects of Health (3 hrs.)  
 Heal 38.485 Health Workshop (3 hrs.)  
 Heal 38.515 Problems in School Health (3 hrs.)  
 Heal 38.513 Analysis of Physiological Concepts (3 hrs.)  
 Heal 38.511 Current Literature in Health (3 hrs.)  
 Heal 38.597 Directed Readings in Health (3 hrs.)
- j. Program B, Plan B (Specialization in Health Education without Thesis, minimum 36 hours)
- 1) Required Courses (12 hours)
 

Same as Program B, Plan A above.
  - 2) Elective Courses (24 hours). At least six hours in Health Education must be selected from courses numbered 500-699.
 

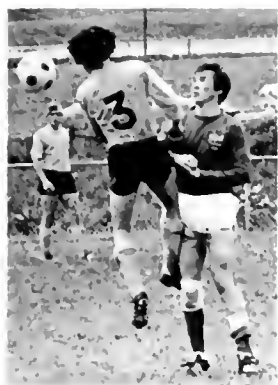
**Six** hours in Education.  
**Eighteen** hours in Health Education to be selected under advisement from the following courses:  
 Same as Program B, Plan A above.
- k. Program B, Plan B (Specialization in Mathematics without Thesis, minimum 36-39 hours)
- 1) Required Courses (12 hours)
 

**Nine** hours in Education.  
 Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)  
 Educ 29.691 Introduction to Research in Education (3 hrs.)  
 Educ 27.681 Seminar in Secondary Education

**Three** hours from the following:  
 Psyc 70.511 Developmental Psychology (3 hrs.)
  - 2) Elective Courses (24 hours)
 

**Six** hours in Education.  
**Eighteen to twenty-one** hours in Mathematics to be selected in consultation with the Mathematics Department, Graduate Committee, and subject to the following requirements:  
**Fifteen** hours from categories I through IV.  
**Category I: Analysis** — at least one course from:  
 50.373 — Calculus III (4 hrs.)  
 50.435 — Numerical Analysis I (3 hrs.)  
 50.436 — Numerical Analysis II (3 hrs.)  
 50.471 — Differential Equations (3 hrs.)  
 50.473 — Advanced Calculus I (3 hrs.)





## PHYSICAL EDUCATION



50.474 — Advanced Calculus II (3 hrs.)

50.475 — Complex Analysis (3 hrs.)

**Category II: Algebra** — at least one course from:

50.365 — Linear Algebra (3 hrs.)

50.367 — Theory of Numbers (3 hrs.)

50.461 — Advanced Topics in Algebra (3 hrs.)

50.561 — Elements of Galois Theory (3 hrs.)

**Category III: Probability, Statistics, Applications** — at least one course from:

50.377 — Mathematics Models (3 hrs.)

50.530 — Statistics — An Integrated Approach (4 hrs.)

50.531 — Topics in Probability (3 hrs.)

50.591 — Seminar in Mathematical Applications (3 hrs.)

23.315 — Survey of Programming Languages (3 hrs.)

23.411 — Systems and Design (3 hrs.)

**Category IV: Geometry and Topology** — at least one course from:

50.457 — Differential Geometry I (3 hrs.)

50.477 — Topology (3 hrs.)

50.551 — Math Research in Graph Theory (3 hrs.)

50.553 — Topics in Geometry (3 hrs.)

Six hours in category V.

**Category V**

50.501 — History of Mathematics (3 hrs.)

50.525 — Seminar in Mathematics Education (3 hrs.)

1. Program B, Plan A (Specialization in Physical Education with Thesis, minimum 33 hours)

1. Required courses (12 hours)

**Nine** hours in Education

Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)

Educ 29.691 Introduction to Research in Education (3 hrs.)

Educ 27.699 Master's Thesis in Secondary Education (3 hrs.)

**Three** hours from the following:

Psyc 70.511 Developmental Psychology (3 hrs.)

Phed 60.509 Psychology of Motor Learning (3 hrs.)

- 2) Elective Courses (21 hours). A maximum of six hours permitted at the 300-499 levels in Physical Education.

**Three** hours in Education

**Eighteen** hours in Physical Education approved by the Physical Education department. All students must elect either 60.541 Evaluation Techniques in Physical Education or 60.539 Critical Analysis of Current Literature.

- m. Program B, Plan B (Specialization in Physical Education without Thesis, minimum 36 hours.)

- 1) Required courses (12 hours)

**Nine** hours in Education

Educ 29.501 Educational Ideas in Historical Perspective

Educ 29.691 Introduction to Research in Education

Educ 27.681 Seminar in Secondary Education

**Three** hours from the following:

Psyc 70.511 Developmental Psychology (3 hrs.)

Phed 60.509 Psychology of Motor Learning (3 hrs.)

- 2) Elective Courses (24 hours). A maximum of six hours permitted at the 300-499 levels in Physical Education.

**Six** hours in Education

**Eighteen** hours in Physical Education approved by the Physical Education department. All students must elect either 60.541 Evaluative Techniques in Physical Education or 60.539 Critical Analysis of Current Literature.

## READING



n. Program B, Plan B (Specialization in Reading without Thesis, minimum 33 hours)

1) Required Courses (12 hours)

**Nine** hours in Education

Educ 29.501 Educational Ideas in Historical Perspective (3 hrs.)

Educ 29.691 Introduction to Research in Education (3 hrs.)

Educ 27.681 Seminar in Secondary Education (3 hrs.)

**Three** hours in Psychology

Psyc 70.511 Developmental Psychology (3 hrs.)

2) Additional Required Courses in Reading and Education (12 hours).

Educ 29.414 Educational Tests and Measurement (special section for reading programs)

Educ 27.360 Teaching Reading in the Secondary School

Educ 29.425 Corrective Reading

Educ 29.621 Reading Disabilities

3) Elective Courses (12 hours) to be selected from each of the following areas:

**Three** hours in Reading

Educ 27.461 Teaching Reading in Secondary Content Areas

OR

Educ 27.463 Developmental Reading for the Early Adolescent

**Three** hours in Psychology

Psyc 70.521 Advanced Educational Psychology

OR

Psyc 70.540 Mental Hygiene in Education

**Three** hours in English — Linguistics (Elect one course from the following:)

Engl 30.325 Historical Linguistics

Engl 30.327 Structural Linguistics

Engl 30.329 History of American English

Engl 30.430 History of the English Language

Engl 30.431 Structure of the English Language

Engl 30.531 Studies in Linguistics

## Course Descriptions

Course descriptions for all 300-level through 600-level courses offered by the College and applicable to graduate students are listed in this section of the Bulletin.

Courses offered in any session are selected from the courses listed. Students should consult the course schedules issued by the Registrar's Office and the Evening and Summer School Office to determine the courses offered in a particular session.

Each department of the College has one or more code numbers and abbreviations for each general subject area (e.g., French in the Modern Language Department). The code abbreviations are shown in parentheses at the head of the course listings. The code numbers form a two digit Subject Classification Number, which precedes a three digit Course Classification Number, forming a five digit Course Number. Each course has a distinctive number.

Semesters of a year course whose numbers are separated by a hyphen are to be taken in sequence. When course numbers are separated by a comma, either semester may be taken independently of the other. Old course numbers appear in parentheses.

# Art

Chairperson: Thomas G. Supensky  
Graduate Studies Coordinator;  
Art Education Program: John B. Mitchell

## *ART COURSES (ART)*

### *Upper Division — Undergraduate and Graduate*

**12.314 THE ART OF ENAMELING ON METAL (3)** Design as applied to the art of enameling on copper and silver. The appreciation of master works of enameling from medieval to contemporary times. Studio work and lectures. Prerequisite: 12 103, 12 104

**12.318 JEWELRY (3)** Investigation into aesthetics, history, function and design of jewelry. Lecture and directed studio problems in forming, joining and finishing of metallic and non-metallic materials. Prerequisite: 12 103 and 12 104 or consent of instructor

**12.323 PICASSO TO THE PRESENT (3)** Art History with emphasis on painting from 1900 to the present. Slide lectures, directed readings and museum trips. Prerequisite: 12 121 and 12.122

**12.324 HENRY MOORE TO THE PRESENT (3)** Art History with emphasis on sculpture from 1900 to the present including new media and happenings. Directed readings and museum trips. Prerequisite: 12 121 and 12 122

**12.325 FRANK LLOYD WRIGHT TO THE PRESENT (3)** Art History with emphasis on architecture from 1900 to the present including time-space concepts. Prerequisite: 12 121 and 12 122

**12.326 FABRIC DESIGN (3)** Design problems executed with fabric. Instruction in tie dying, batik, block printing, silk screen on fabric. Prerequisite: 12 103, 12 104 or consent of instructor

**12.328 WEAVING AND FIBER CONSTRUCTION (3)** Design problems executed in fibers and fabrics. Instruction in loom and hand weaving, macrame, stitchery, rug hooking, etc. Aesthetic and historical considerations. Prerequisite: 12.103, 12.104 or consent of instructor.

**12.334 ADVANCED PHOTOGRAPHY (3)** Continued research with the photographic aesthetic. Emphasis on independent investigation. Student must have camera with adjustable diaphragm and shutter. Prerequisite: 12 234 or written consent of instructor based on demonstration of technical competence.

**12.335 COLOR PHOTOGRAPHY I (3)** An investigation into the use of color and form in still photography through the use of positive and negative transparencies. Prerequisite: 12 234 and 12.334 or equivalent.

**12.339 METAL SCULPTURE (3)** Conceptual and technical problems involved in forging, forming, welding, soldering and finishing both ferrous and non-ferrous metals. Prerequisite: 12 240 or 12 241

**12.340 SCULPTURE STUDIO: MODELING (3)** Continued studio experience in modeling with emphasis on the use of a variety of techniques and materials: wax, plasters, cements, clay, resins, epoxy metals. Prerequisite: 12 240

**12.342 SCULPTURE STUDIO: CARVING (3)** Technical and aesthetic problems involved in carving stone, wood and other carvable media, studio problems, museum visits. Prerequisite: 12 241

**12.343 GREEK AND ROMAN ART (3)** Studies in architecture, the decorative arts and sculpture, slide lectures, readings and museum visits. Prerequisite: 12.121.

**12.344 BYZANTINE TO GOTHIC ART (3)** Studies in architecture, the decorative arts and sculpture, slide lectures, readings and museum visits. Prerequisite: 12.121.

**12.345 ITALIAN RENAISSANCE ART: 15th-16th CENTURIES (3)** Studies in architecture, painting and sculpture, slide lectures, readings and museum visits. Prerequisites: 12.122.

**12.346 THE BAROQUE AND 18th CENTURY (3)** Studies in European architecture, painting and sculpture of the period. Slide lectures, readings and museum visits. Prerequisite: 12.122.

**12.405 ART PRINCIPLES AND CRITICISM (3)** Principle concepts of art, theories of perception and aesthetics, application of theories to the interpretation of specific works of art. Prerequisite: 12.105 or 12.121 or 12.122.

**12.414 ADVANCED STUDIO (1-4)** Practice for advanced students in their field of special interest. May be re-elected to a total of four credits. Prerequisite: Must have exhausted other courses in particular field or written consent of instructor. Students must make arrangements with instructor of his choice.

**12.415 ADVANCED STUDIO (1-4)** Practice for advanced students in their field of special interest. May be re-elected to a total of four credits. Prerequisite: Must have exhausted other courses in particular field or written consent of instructor. Student must make arrangements with instructor of his choice.

**12.416 ADVANCED STUDIO (2-3)** Independent work for advanced students in field of special interest. Prerequisites: Must have exhausted other courses in particular field or written consent of instructor. Student must make arrangements in advance of registration.

**12.418 JEWELRY II (3)** Continued studio experiences in jewelry. Directed studio problems in the techniques of casting, fabrication, raising, forging, stone setting. With an emphasis on independent work and personal expression. Prerequisite: 12.318.

**12.431 ADVANCED CERAMICS (3)** Individually designed studio problems for advanced students in ceramics. Prerequisite: 12.331.

**12.433 ADVANCED PAINTING (3)** Individually selected studio problems for advanced students in area of special interest. Prerequisite: 12.329 or 12.330.

**12.440 ADVANCED SCULPTURE STUDIO (3)** Individually selected studio problems for advanced students in their area of special interest. Prerequisite: 12.340 or 12.342.

**12.449 INTAGLIO PROCESS (3)** Personal expression in print-making: etching, drypoint, aquatint, engraving, and other intaglio processes. Prerequisite: 12.103, 12.111 or consent of instructor.

**12.451 LITHOGRAPHIC PROCESS (3)** Personal expression through printing from Litho stones and plates. Prerequisite: 12.103, 12.111 or consent of instructor.

**12.461 INTRODUCTION TO ART THERAPY I (3)** A survey of the concepts and procedures of creative expression in the service of personal understanding and development. Consideration of educational, rehabilitative and psychiatric settings. Lectures, discussions, workshops, and readings. Prerequisites: Approved work experience in one of the following field may be substituted: Art, Psychology, Health, Mental Health, or associated fields.

**12.462 INTRODUCTION TO ART THERAPY II (3)** Continuation of Art Therapy I, the work of the therapist. Case studies, observations and participation in a variety of settings. Discussion, fieldwork and readings. Prerequisite: 12.461 or consent of instructor.

**12.471 ADVANCED ART EDUCATION (3)** Art education problems at all levels; materials and skills in relation to classroom needs. Prerequisite: 12.371 or equivalent.

**12.485 SEMINAR IN ART HISTORY (3)** Intensive analysis of a defined historical period or stylistic development in art. Directed readings in both period and contemporary sources. Discussions and museum tours. Prerequisite: 12 121 and 12 122 or consent of instructor.

### *Graduate Division*

**12.511 DRAWING (3)** Advanced problems in expressive draftsmanship. Prerequisite: 12 211 or consent of instructor.

**12.514-515-516 GRADUATE STUDIO (2-3, 2-3, 2-3)** Independent work for graduate students in field of special interest. Prerequisite: Must have exhausted other courses in particular field or written consent of instructor. Student must make arrangements in advance of registration with instructor of her/his choice.

**12.529 OIL PAINTING (3)** For students with previous experience in painting; consideration of current trends and styles; studio work, museum visits, lectures. Prerequisite: 12 329 or equivalent.

**12.530 WATERCOLOR (3)** Consideration of current trends and outstanding painters and styles. Studio work, museum visits, lectures. Prerequisite: 12 330 or consent of instructor.

**12.531 CERAMICS (3)** Advanced work in ceramic design and techniques of glazes, clay bodies, firing. Prerequisite: 12.331 or consent of instructor.

**12.540 SCULPTURE (3)** For students with previous experience in sculpture; consideration of current trends and styles; studio work, museum visits, lectures. Prerequisite: 12 340 or 12 342 or 12 241 or 12.339 or consent of instructor.

**12.551 GRAPHICS: INTAGLIO, RELIEF (3)** Studio work for artists with a basic knowledge of intaglio and/or relief processes. Aspects of mixed media explored. Prerequisite: 12 349 or 12 449 or equivalent.

**12.553 GRAPHICS: LITHOGRAPHY, SERIGRAPHY (3)** Studio work for artists with a basic knowledge of lithography and/or serigraphy. Prerequisite: 12.347 or 12.451 or equivalent.

**12.595 RESEARCH IN ART AND ART EDUCATION (3)** Methods of research applicable to art and art education. Examination of recent research in this field. Students will explore areas of their choice. Prerequisite: Consent of instructor.

**12.697 SEMINAR IN ART EDUCATION (3)** Investigation of problems in art education and related fields; examination of theories of art and art education. To be taken as final course in Master's program. Prerequisite: 12.595 and consent of instructor.

**12.699 ART THESIS: CREATIVE PROJECT (3)** If approved, student will pursue his project resulting in an exhibition of his work plus a paper defining the project's scope and philosophy. Prerequisite: 12.697 and consent of the department.

## Audiovisual Communications

Chairperson: Gary W. Rosecrans

Graduate Studies Coordinator:

Audiovisual Communications Program: Robert Z. West

### *AUDIOVISUAL COMMUNICATIONS COURSES (AVCO)*

#### *Upper Division — Undergraduate and Graduate*

**13.401 HISTORY OF INSTRUCTIONAL TECHNOLOGY AND MATERIALS (3)** An examination of the development of instructional technology with particular emphasis on the influence of government, state departments of education, institutions of higher learning, industry and professional organizations on the various instructional media. Identification of the contribution of media leaders. LAB FEE \$5 00

**13.415 METHODS AND MATERIALS IN NEW INSTRUCTIONAL MEDIA (3-4)** Methods of instruction through media such as television, motion pictures, audio and video recordings, transparencies, field trips, slides, etc., are emphasized. The communications process is stressed throughout as are the selection, source locations, utilization, and evaluation of equipment, devices and materials. Students are required to demonstrate competencies in the operation of basic devices for instruction. LAB FEE \$5.00.

**13.417 CLASSIFICATION AND CATALOGING OF AUDIOVISUAL MATERIALS (3)** Emphasis is placed on all types of classifying and cataloging non-print materials in accordance with the Dewey Decimal System. Other systems of classification and cataloging are surveyed. Rules for form of entry, factors determining choice and form of subject heading and descriptive cataloging are studied. This course is designed especially for librarians, media generalists and specialists, and teachers. Audiovisual equipment, devices, and materials are used to optimum advantage throughout. LAB FEE \$5.00.

**13.431 SURVEY OF LEARNING BY TELEVISION (3)** History, status, and goals of television as used for learning. Topics include: television systems (cable, satellite, etc.), programming sources, legal ramifications, instructional television, sources of funds, comparative costs, special projects, current research, and sources of data. Students will be required to demonstrate competencies in the operation of some portable television equipment. LAB FEE \$5.00.

**13.433 INSTRUCTIONAL TELEVISION (3)** The ITV movement; ITV systems and terminology; elements of production; classroom utilization of the ITV product, developing the ITV workshop, careers in ITV, and aspects of administration, philosophy, evaluation, and research in ITV. Students will be required to demonstrate competencies in critiquing ITV programs, and in the writing and production of scripts utilizing appropriate television facilities. LAB FEE \$5.00.

**13.435 INSTRUCTIONAL TELEVISION UTILIZATION (3)** A course combining televised lessons, on-campus seminars, and related workbook assignments. (This three credit upper division undergraduate and graduate level course focuses upon planning for the various uses of instructional television with students.) State, local school unit, school and classroom uses will be illustrated through film and studio production. In addition, the aspects of producing the ITV program are developed through the television lessons and "hands-on" assignments in the seminars. LAB FEE \$5.00. This course does not carry Master's degree credit.

**13.441 COMPUTER TECHNOLOGY AND UTILIZATION (3)** Exploratory course concerned with the rationale for and use of computers in learning and related administrative matters. Techniques are examined for the organization, storage, processing, and retrieval of data. Applications include the computer for instruction, the management of instruction, simulation, generation of graphics, and accounting for software and hardware. Key punching, flow charting, and shared-time computer experiences are provided. Field trips to on-off-campus computer installations are taken. (Note: the course will not prepare students for occupations in computer science.) LAB FEE \$5.00.

**13.453 INTRODUCTION TO AUDIOVISUAL PHOTOGRAPHY (3)** Basic philosophy, planning, and darkroom methods and techniques of preparing photographic audiovisual materials. Although the thrust of the course is the black and white mode, color slides and other special topics are treated. Principles of visual literacy are stressed. Students are required to demonstrate competencies in darkroom utilization and print critiquing as well as print production. LAB FEE \$10.00.

**13.455 GRAPHICS COMMUNICATIONS (3)** Includes the language and design of graphics communications based upon principles from psychology and the visual arts. Visual literacy is also stressed. Demonstrated competencies are required in the design and production of selected visual instructional materials. LAB FEE \$10.00. Prerequisite: 13.485 or departmental approval.

**13.485 SEMINAR WORKSHOP IN INSTRUCTIONAL TECHNOLOGY (3)** Special problems in instructional technology are treated. Included are the philosophy, scope, planning, and techniques of the preparation and production of selected types of photographic and related graphic materials. Computer-assisted instruction, random access and information and retrieval systems, simulators and trainers as well as significant developments in hardware and software are stressed. International aspects are also included. Field trips are part of the class experience. LAB FEE \$5.00. Prerequisite: Three hours of audiovisual communication courses at the 400 level or above, or departmental approval.

**13.487 THEORY AND TECHNIQUES OF LINEAR PROGRAMMED INSTRUCTION (3)**

Acquaints students with philosophy and principles of linear programming; analysis and evaluation of commercially prepared and instructor-made programs; instructional utilization; current research; developments; and trends. An opportunity is provided for the student to develop a linear program in his own area of interest. LAB FEE \$5.00

**13.488 THEORY AND TECHNIQUES OF INTRINSIC PROGRAMMED INSTRUCTION (3)**

Principles and philosophy of intrinsic programming as related to the Crowderian techniques of programming; analysis of development; consideration of psychological learning principles involved; relation to and utilization in computer-assisted instruction. An opportunity is afforded the student to develop an intrinsic program in his area of interest. LAB FEE \$5.00. Prerequisite: 13.487 or instructor approval.

**GRADUATE DIVISION****13.501 ORGANIZATION, ADMINISTRATION AND SUPERVISION OF AUDIOVISUAL COMMUNICATIONS PROGRAMS (3)**

Organizational patterns, management procedures, and supervisory methods and techniques for instructional materials centers are considered. Major topics include: facilities, finance, selection, procurement, security and basic maintenance of equipment and materials, center operation, extension and in-service programs; assessments of systems and programs; and public relations. LAB FEE \$5.00. Prerequisite: Six hours of audiovisual communications courses at the 400 level or above (13.415 or equivalent is strongly recommended) and/or departmental approval.

**13.533 AUDIOVISUAL MOTION PICTURE FILMMAKING I (3)**

Provides an introduction to the production of motion picture films designed for audiovisual instructional use. Included in the course are basic audiovisual filming techniques, audiovisual scripting, editing, and a survey of motion picture filming equipment. LAB FEE \$10.00. Prerequisite: Six hours of audiovisual communications courses at the 400 level or above (including 13.415) and departmental approval.

**13.534 AUDIOVISUAL MOTION PICTURE FILMMAKING II (3)**

This course, building on previously acquired fundamentals, culminates in the production of an instructional motion picture for audiovisual classroom use. To this end, the student will explore and develop a working knowledge of script-writing techniques, directional techniques including areas such as: background, audio, lighting, and optics applications. Special effects techniques, such as animation, slow and stop motion, and split screen will be developed in the course. LAB FEE \$10.00. Prerequisite: Audiovisual Motion Picture Filmmaking I.

**13.557 SPECIAL PROJECTS IN THE PREPARATION OF AUDIOVISUAL MATERIALS (3)**

Theory, planning and application of advanced methods and techniques in the preparation of audiovisual materials are stressed. Student projects may involve aspects of photography, printing, holography, and related materials production. Field trips may also play an important role. LAB FEE \$10.00. Prerequisite: 13.453 or departmental approval.

**13.563 APPLIED PSYCHOLOGY OF LEARNING (3)**

Includes Gagne's types of learning and recent psychological findings as applied to instructional communications in such areas as: programmed instruction, sensory materials of learning, random access and information retrieval systems; and instructional television. LAB FEE \$5.00.

**13.567 INSTRUCTIONAL DEVELOPMENT (3)**

Includes an overview of the systems approach and its use in problem solving. The application of the systems approach with instructional technology to the problems of instruction is studied in detail. Students are required to demonstrate competencies in designing mediated instructional sequences and in evaluating media with behavioral descriptors. Prerequisite: 6 hours of audiovisual communications courses at the 400 level or above (including 13.563) or departmental approval.

**13.573 INSTRUCTIONAL FACILITIES DESIGN (3)**

A systems approach to the integration of media and facilities in a single unit to fulfill instructional/training goals. Includes a schedule of time and sequential phasing to insure orderly relationships and interaction of human, technical, and environmental resources. Included are the application of equipment and facilities designed to mediate self-instruction as a part of individually prescribed instruction as well as equipment and facilities designed for large group or multimedia instruction. Student projects include facility designs for academic/training utilization. Prerequisite: Six hours of audiovisual communications courses at the 400 level or above and/or departmental approval.

**13.689 INTERNSHIP IN AUDIOVISUAL COMMUNICATIONS (3-6)** Practical experience in audiovisual communications is provided. The intern will work cooperatively under the direction of an appropriate College faculty member and an appropriate media field supervisor. Field trips may range from visits to local facilities to national agencies. A formal paper is required, appropriate in format and length to the nature of the internship. Prerequisite: Nine hours of audiovisual communications courses at the 400 level or above, and departmental approval

**13.695 THEORY AND RESEARCH IN AUDIOVISUAL COMMUNICATIONS (3)** Basic elements of communications theory are studied and applied to audio visual communications. Relationships between the learning process and perception are reviewed in terms of communications. Selected communications systems are examined and research in audiovisual communications is analyzed and discussed. LAB FEE \$5.00 Prerequisite: Twelve hours of audiovisual communications courses at the 400 level or above, or departmental approval

**13.699 MASTER'S THESIS IN AUDIOVISUAL COMMUNICATIONS (6)** An original investigation, using an acceptable research method and design of a research problem, to be conducted under the direction of one or more faculty members. Credit granted only *after* thesis has been accepted by student's thesis committee. Prerequisite: Fifteen hours of audiovisual communications courses at the 400 level or above and departmental approval

## Biological Sciences

Chairperson: Howard R. Erickson  
Graduate Studies Coordinator;  
Biology Program: Fredericka Kundig

### *BIOLOGY COURSES (BIOL)*

#### *Upper Division — Undergraduate and Graduate*

**14.301 (401) FIELD NATURAL SCIENCE (4)** A study of various natural environments to determine their physical and biological components and to understand the relationship of these forms to one another and to man. Emphasis is on field observation. An average of three laboratory hours per week. May not be used toward MS degree in Biology

**14.303 LIFE SCIENCE IN THE ELEMENTARY SCHOOL (3)** Emphasis placed on the conceptual approach to science teaching, the modes of scientific inquiry, and the utilization of living organisms in the classroom. May not be used toward MS degree in Biology. Prerequisite: 14.101

**14.310 (471) ENVIRONMENTAL CONSERVATION (4)** Basic conservation practices and problems. Soil, water, forest, and wildlife resources with emphasis on interrelationships. Specialists in various phases of local, state, and federal conservation work conduct or assist in the conduct of numerous field trips. Average of two laboratory hours per week.

**14.315 MEDICAL MICROBIOLOGY (4)** General microbiological techniques. Pathogenesis of bacterial, viral, rickettsial and fungal diseases with emphasis on medically important bacteria. Either this course or 14.318, but not both courses, may count toward MS degree in Biology. Prerequisites: 14.101 and 22.101, or consent of instructor. The latter may be taken concurrently

**14.318 (407) MICROBIOLOGY (4)** A course investigating the basic principles of such groups of organisms as bacteria, protozoa, and lower plant forms, with emphasis on bacteria. Average of three laboratory hours per week. Either this course, or 14.315, but not both courses, may count towards MS degree in Biology. Prerequisites: CHEM 22.101, 22.102. The latter may be taken concurrently.



**14.322 (421) MICROTECHNIQUE (3)** Techniques used in preparation of plant and animal tissues for histological examination. Average of two laboratory hours per week. Prerequisites: CHEM 22.101, 22.102

**14.331 (205) FIELD AND SYSTEMATIC BOTANY (4)** Plant kingdom centered around taxonomy and ecology. Methods of collection, identification and preservation will be developed in the field and laboratory. Average of three laboratory hours per week. May not be used toward MS degree in Biology. Prerequisite: 14.105 or consent of instructor.

**14.341 PHYCOLOGY (4)** The systematics, structure, ecology, physiology, and life histories of algae. Laboratory will include methods of collection, culture, and experimental study of selected species. Prerequisite: 14.105

**14.345 (445) MYCOLOGY (4)** An introductory study of the morphology, classification, life histories, and economic applications of the fungi. Average of three laboratory hours weekly. Prerequisite: 14.105

**14.351 (355) FIELD AND SYSTEMATIC VERTEBRATE ZOOLOGY (4)** Evolution, distribution, and definitive features of each class are studied comparatively. Extensive field and laboratory work deals with morphologic, taxonomic, ecological, and behavioral features of selected vertebrate groups and species. Average of three laboratory hours per week. May not be used toward MS degree in Biology.

**14.353 INVERTEBRATE ZOOLOGY (4)** Aquatic and terrestrial species of phyla from the protozoa through the echinodermata with special emphasis on local forms. Economic, Ecological and Taxonomic considerations. Average of 3 laboratory hours per week.

**14.360 (422) HISTOLOGY (3)** Tissues of the vertebrate body. Average of two laboratory hours per week. Prerequisite: 14.109.

**14.367 GENERAL ENDOCRINOLOGY (3)** Endocrine mechanisms regulating homeostasis and functional integrity of animals with emphasis on vertebrates. Prerequisites: CHEM 22.101-102 and 14.109 or equivalent.

**14.371 (451) ANIMAL BEHAVIOR (4)** The classification and evolutionary aspects of behavior with emphasis on behavioral mechanisms. An average of two laboratory hours per week.

**14.381 (493) BIOLOGICAL LITERATURE (2)** Familiarization with the literature of biology through the preparation of papers requiring a knowledge of techniques for exploring the literature. Two one-hour lectures per week. May not be used toward MS degree in Biology. Prerequisite: At least 6 hours of biology.

**14.383 (391) HISTORY OF BIOLOGICAL CONCEPTS (3)** The development of selected biological concepts from antiquity to the present through the reading of classical and contemporary writings. Two lecture hours and one discussion hour each week. May not be used toward MS degree in Biology.

**14.385 (489) SELECTED GENERAL PRINCIPLES IN BIOLOGY (3)** Current directions of biological investigations will be discussed together with a treatment of recent contributions to biological areas and principles. Sufficient background will be given to provide coherence and understanding. Three one-hour lectures. May not be used toward MS degree in Biology. Prerequisite: Consent of instructor.

**14.387 BIOLOGY IN SOCIETY (3)** Considerations given to the biological aspects of the environment; its concepts and problems and their effects upon the population. May not be used toward MS degree in Biology.

**14.395 COURSE RESEARCH (1)** Research related to a specific course successfully completed by the student. May not be used toward MS degree in Biology. Prerequisite: By invitation or with the consent of the instructor.

**14.401 (411) GENETICS (4)** Heredity and variation, and their application to evolution and development. Gene action at the morphological, physiological and biochemical levels. Laboratory work entails use of *Drosophila*, corn, and *Neurospora* in the application of genetic principles. Average of two laboratory hours per week. May not be used toward MS degree in Biology. Prerequisites: CHEM 22.102 and MATH 50.115 or consent of instructor.

**14.402 (304) GENERAL ECOLOGY (4)** Basic principles of ecology, interrelationship between animals and plants and their natural environments, emphasizing the specific biomes available for study in Maryland. An average of two laboratory hours per week.

**14.403 (412) ADVANCED GENETICS (3)** Emphasis on the molecular basis of gene action. Discussion of current work and methods related to the problem of gene structure, function, and mutation including the translation and regulation of genetic information. Prerequisite: 14.401 or its equivalent or consent of instructor

**14.404 ECOLOGICAL TECHNIQUES (3)** A series of lectures and readings on standard investigative techniques employed by ecologists in the various speciality fields. An individual investigation, laboratory or field, using appropriate equipment is required. Prerequisite: 14.304 or its course equivalent.

**14.406 LIMNOLOGY (4)** A study of inland waters. The physical, chemical, and biological factors that affect fresh-water organisms, and some of the standard methods used to analyze these factors. Prerequisite: 14.101, CHEM 101-102, PHYS. 211-212.

**14.408 (409) CELL BIOLOGY (4)** A study of the molecular and morphological organization of the cell in relationship to functions of the cells organelles. An average of three laboratory hours per week. Prerequisites: 14.105, 14.109, CHEM 22.331, 22.332.

**14.411 (405) WILDLIFE BIOLOGY (4)** Important wildlife species with emphasis on aspects of research and management. Specific techniques and problems are studied in the field. Average of two hours per week in laboratory and field work. Prerequisite: Permission of instructor.

**14.421 IMMUNOLOGY (4)** Fundamental principles of immunology with emphasis on the nature of antibodies and antigens, blood groups, antibody-antigen reactions, hyper-sensitivity, autoimmucination, tumor immunology, artificial grafting and the preparation of vaccines. Prerequisites: 14.315 or 14.318 or consent of instructor

**14.429 BIOANALYSIS (3)** Microscopic and Biochemical methods used in determining major components and important contaminants of feeds, spices, stabilizers, adhesives, bakery materials, fats and oils, meat products, crystal mixtures, dairy products, etc. An average of two hours weekly in laboratory and field work. Prerequisites: 14.105, CHEM 22.101, 22.102 or permission of instructor.

**14.432 VASCULAR PLANT TAXONOMY (4)** A study of the history and principles of vascular plant systematics with laboratory time devoted to collection and identification of plants in the local flora. Prerequisites: 14.105, 14.331 or consent of instructor.

**14.433 PLANT SPECIATION (3)** A study of such speciation phenomena as race isolation, hybridity, polyploidy, apomixis, and self-compatibility as they influence the evolution of new populations. Prerequisite: 14.331.

**14.436 (437) PLANT PHYSIOLOGY (4)** Life functions of plants as related to structure at all levels: cells, organs, and the complete organism. Consideration of the interaction of environmental and genetic factors on plant metabolism. Average of three laboratory hours per week. Prerequisites: 14.105 and CHEM 22.101, 22.102. CHEM 22.231 recommended

**14.439 PLANT ANATOMY (4)** Origin and development of organs and tissue systems in vascular plants. Average of three laboratory hours per week. Prerequisite: 14.105.

**14.441 PLANT PATHOLOGY (4)** A study of plant diseases, their symptoms, causal agents, etiology, epidemiology, prevention, and control. Average of three laboratory hours per week. Prerequisite: 14.105

**14.456 (457) ORNITHOLOGY (4)** Lecture, laboratory and field course in bird identification, structure, behavior, ecology, and general economic relationships. Emphasis is on birds of the Baltimore area. A banding station is operated in conjunction with the course. Occasional field trips. Average of two laboratory hours per week.

**14.458 (459) MAMMALOLOGY (4)** The evolution, comparative morphology, systematics, and distribution of mammals. Representative life histories are considered. Average of two laboratory hours per week. Prerequisite: Permission of instructor.

**14.461 ENTOMOLOGY (4)** Laboratory and field course in insects. Identification and recognition of the more common families and orders, and a study of their structure, behavior, ecology, economic importance, and control. Average of three laboratory hours per week.

**14.463 ANIMAL EMBRYOLOGY (4)** Developmental anatomy and the underlying principles involved in development. This last area will be approached from an experimental base. Average of three laboratory hours per week. Prerequisite: 14.109.

**14.465 (365) ANIMAL PHYSIOLOGY (4)** Functioning of animal organ systems, with emphasis on the vertebrate body. Average of three laboratory hours per week. Prerequisites: 14.109, CHEM 22.101, 22.102.

**14.467 EXPERIMENTAL ENDOCRINOLOGY (2)** An introduction to techniques and procedures commonly employed in endocrine research. Prerequisite: 14.367.

**14.481 (491) DIRECTED READING IN BIOLOGY (1-3)** Independent reading in an area selected by the student in consultation with the instructor. May not be used toward MS degree in Biology. Prerequisite: A minimum of 10 hours in Biology.

**14.486 SEMINAR: SPECIAL TOPICS IN BIOLOGY (1-2)** Study and discussion of topics in a specialized area to be selected by instructor. Areas will vary from semester to semester. May not be used toward MS degree in Biology. Prerequisites: A minimum of 10 semester hours in Biology or consent of instructor.

**14.491 (496) INDEPENDENT RESEARCH IN BIOLOGY (2-3)** Independent investigation of a problem under the supervision of a staff member culminating in a written presentation. May not be used toward MS degree in Biology. Prerequisite: A minimum of 15 semester hours in Biology and consent of instructor.

**14.494 TRAVEL STUDY (1-3)** A detailed investigation of field oriented problems in Biology away from the Towson State Campus. Locations and topics to be selected by the department and instructors sponsoring the program. Prerequisites: 14.101 and consent of instructor.

**14.495 COURSE RESEARCH (1)** Research related to a specific course successfully completed by the student. May not be used toward MS degree in Biology. Prerequisites: By invitation or with consent of instructor.

### *Graduate Division*

**14.501 CURRENT TOPICS IN BIOLOGY (3)** Discussion of current topics in a specific area of biology. The area will vary each time the course is offered. A maximum of 3 credits allowable for MS degree in Biology. Prerequisite: A suitable background in the area emphasized.

**14.505 PROBLEMS IN BIOLOGY (1-3)** Laboratory or literature research on a particular problem of interest to the student that does not pertain to his thesis. Regular conferences with the instructor are required. A preliminary paper is submitted for discussion, suggestions and corrections. The final paper should incorporate the necessary changes. Credits to be arranged by consultation with the instructor. A maximum of 3 credits allowable for MS degree in Biology.

**14.507 PHYSIOLOGICAL ANIMAL ECOLOGY (4)** A study of the physiological responses of animals to varying ecological conditions. Prerequisites: 14.304, 14.465.

**14.509 AQUATIC BIOLOGY (4)** A study of freshwater and brackish water plants and animals of the local area with a field emphasis. Several representative habitats are considered comparatively, using various methods of collecting and identifying species of the fauna and flora. Prerequisites: 14.331, 14.351, 14.353 or consent of instructor.

**14.533 PLANT MORPHOGENESIS (4)** The morphological growth and development of plants in response to natural and artificial stimuli at the cellular, tissue, and organ level. Prerequisite: 14.439.

**14.534 PLANT DISTRIBUTION (3)** A study of the present distribution of the earth's major vegetational formations as related to environmental factors. Special emphasis is given to the terrestrial biomes of North America. Prerequisites: 14.331; 14.432 recommended.

**14.535 ENVIRONMENTAL PLANT PHYSIOLOGY (3)** Physiological interactions between plants and environments at the organism level. Exchanges of physical and chemical factors such as energy, gases, water, pesticides, air and water pollutants, fertilizers, lime and radioactive materials. Prerequisites: 14.436 or consent of instructor.

**14.553 BIOLOGY OF TERRESTRIAL AND FRESHWATER INVERTEBRATES (4)** An advanced study of invertebrates including classification, physiology, and various ecological parameters influencing distribution of local fauna in freshwater and terrestrial habitats. Parasites and terrestrial insects are excluded. Prerequisites: 14.353 or consent of instructor.

**14.561 INSECT ECOLOGY (4)** A study of insect communities and populations emphasizing conditions of the environment that favor abundance of insects in various habitats. Field work involves examination of various aquatic and terrestrial habitats. Prerequisites: 14.461, 14.353 recommended.

**14.581 RECENT ADVANCES IN BIOLOGY (4)** A study of current factual and technological advances in the five following areas: botany, zoology, ecology, genetics and evolution, cellular and molecular biology. Completion of this course with a grade of "B" or better fulfills the Departmental Advancement to Degree Candidacy Examination requirement. Prerequisites: 9 graduate credits in biology.

**14.601 NON-THESIS GRADUATE RESEARCH (3)** An individual research project is carried out under the guidance of a graduate faculty advisor. Credit granted only after research paper has been accepted by the student's research committee. Prerequisites: Successful completion of all requirements for the advancement to candidacy examination in Biology MS program.

**14.697 GRADUATE SEMINAR (1)** Student reports and discussion dealing with biological research. An outline of the seminar and a bibliography are required. A maximum of 1 credit allowable for MS degree in Biology.

**14.699 THESIS (6)** An original investigation to be pursued under the direction of one or more faculty members. Credit granted *only* after thesis has been accepted by the student's thesis committee.

## Business Administration

Acting Chairperson: James Wallace

### *BUSINESS ADMINISTRATION COURSES (BUAD)*

#### *Upper Division — Undergraduate and Graduate*

**16.491 ADVANCED BUSINESS POLICY WORKSHOP (3)** A course requiring practical application of principles of management in an organizational framework. Class will integrate functional skills in the areas of finance, marketing, personnel, and management. Prerequisite: Consent of instructor.

# Chemistry

Chairperson: Alan S. Wingrove

## *CHEMISTRY COURSES (CHEM)*

### *Upper Division — Undergraduate and Graduate*

**22.341 PHYSICAL CHEMISTRY - THERMODYNAMICS (3)** Thermodynamics, phase relations, solution properties, chemical equilibrium and electro-chemistry. Prerequisite: 22.102, MATH 50.274 and PHYS 66.212 or PHYS 66.222. 22.241 is recommended.

**22.342 PHYSICAL CHEMISTRY - STRUCTURE AND KINETICS (3)** Introduction to quantum chemistry, atomic and molecular structure, atomic and molecular spectroscopy, introduction to statistical thermodynamics, kinetic theory and chemical kinetics. Prerequisites: 22.102, MATH 50.274, and PHYS 66.212 or 66.222. 22.241 is recommended.

**22.343 PHYSICAL CHEMISTRY LABORATORY I (1)** Five short laboratory projects in physical chemistry. Prerequisites: 22.211 and 22.341 or 22.342.

**22.344 PHYSICAL CHEMISTRY LABORATORY II (1)** Five short laboratory projects in physical chemistry. Prerequisites: 22.211 and 22.341 or 22.342.

**22.351 BIOCHEMISTRY (3)** Introduction to the chemical structure and properties of the constituents of living matter, including amino acids, proteins, nucleic acids, enzymes, carbohydrates and lipids. Enzyme kinetics, equilibria and thermodynamics in biochemical transformation will be presented. Prerequisites: 22.332 or 22.230.

**22.352 BIOCHEMISTRY LABORATORY (2)** To provide a basic working knowledge of a wide variety of laboratory techniques currently in use in the field. Prerequisite: 22.351.

**22.361 CHEMICAL AND BACTERIOLOGICAL STUDIES ON WATER POLLUTION (3)** Deals mainly with water pollution: causes, effects and cures. Considers details of water and waste treatment. Emphasizes technical details of analysis of water. Concerns standards of water purity and variables involved. Demonstration of analytical methods to be given. Case studies and applications are viable approaches to this topic. Prerequisite: Chemistry 22.102 and Biology 14.101.

**22.391 SPECIAL PROBLEMS IN CHEMISTRY (1-3)** A laboratory or library problem in any particular area of chemistry to be selected by the student in consultation with the instructor. Students are required to submit a written report. May be repeated for credit as CHEM 22.392, 22.393, etc. Prerequisite: Written consent of instructor.

**22.401 SEMINAR IN CHEMISTRY (1)** The attendance at all seminars and the presentation of two seminars to the Chemistry Department on topics selected by the chemistry faculty or selected by the student and approved by the faculty. One and one-half hour seminar period. Prerequisites: 22.211, and 22.232 or 22.332; co-requisite: 22.341 or 22.342.

**22.411 INSTRUMENTAL METHODS OF ANALYSIS (4)** Theory, instrumentation, and application of various electrochemical, chromatographic, spectroscopic, and spectrophotometric techniques to chemical analysis. Two lecture hours and one six-hour laboratory period. Prerequisite: 22.211, 22.341 and 22.342 or 22.342 concurrently.

**22.412 ADVANCED ANALYTICAL CHEMISTRY (3)** A special topics course dealing with the theory and application of more recent and specialized techniques of chemical separation and analysis. Three lecture hours. Prerequisite: 22.411.

**22.422 INORGANIC CHEMISTRY (4)** Nuclear and extranuclear structure, molecular orbital and ligand field theories, aqueous and non-aqueous reactions, coordination chemistry, inorganic synthesis, modern instrumentation, etc. Three lecture hours and one three-hour laboratory period. Prerequisite: 22.342 or 22.342 concurrently.

**22.431 ADVANCED ORGANIC CHEMISTRY LABORATORY (2)** Methods of organic synthesis. Emphasis on general types of organic reactions, relying, in part, on original literature sources. Includes considerable individual instruction in laboratory techniques and in the use of equipment and instruments. Two three-hour laboratory periods. Prerequisite: 22.232 or 22.332.

**22.432 ADVANCED ORGANIC CHEMISTRY (3)** Review of fundamentals. Advanced treatment of selected topics in organic chemistry. Typical subject matter areas: (1) reaction mechanisms; (2) structure elucidation; (3) stereochemistry; (4) linear free energy relationships; (5) molecular orbital calculations. Three lecture hours. Prerequisite: 22.232 or 22.332, 22.342 or 22.342 concurrently.

**22.441 ADVANCED PHYSICAL CHEMISTRY (3)** Two topics in the area of Physical Chemistry to be covered in depth. Topics will be selected by the instructor after consultation with the students. Examples of possible topics are: formal wave mechanics, bonding, solid state, liquid state, surface chemistry, colloids, high polymers, rheology, ionic conductivity, electrochemical cells, scattering phenomena, statistical thermodynamics. Three lecture hours. Prerequisite: 22.341 and 22.342.

**22.452 ADVANCED BIOCHEMISTRY (3)** Reactions and mechanisms involving the synthesis and metabolism of the constituents of living matter. A consideration of biological functions on the basis of fundamental principles of chemical thermodynamics and kinetics. Buffers, osmometry, chromatography and spectrophotometry are presented as applied to biochemical systems. Three lecture hours. Prerequisite: 22.351.

**22.453 ADVANCED BIOCHEMISTRY LABORATORY (2)** Basic laboratory techniques involving the synthesis, isolation, purification, identification, and further reactions of substances in biochemical systems. Two three-hour laboratory periods. Prerequisite: 22.351.

**22.491-492-493 INTRODUCTION TO RESEARCH IN CHEMISTRY (1-3)** An individual laboratory and/or library investigation in research interest of an instructor. May be repeated for credit as 22.492, 22.493, 22.494, etc. At the completion of a project, the student is required to give a public seminar on the work done and the principles involved. The vote of the chemistry faculty present in the seminar will be considered by the research supervisor in assigning final grades. Prerequisite: Consent of the instructor.

## Communication Arts and Sciences

Chairperson: Bill L. Wallace  
Graduate Studies Coordinator; Speech  
Pathology and Audiology Program:  
Charles Lonegan, Jr.

### *MASS COMMUNICATION COURSES (MCOM)*

#### *Upper Division — Undergraduate and Graduate*

**53.315 (215) BUSINESS AND PROFESSIONAL SPEECH (3)** The student will participate in various types of speeches and study discussion, conference techniques, and parliamentary procedure. Prerequisite: SPCH 84.131 or its equivalent.

**53.351 PUBLIC OPINION AND THE PRESS (3)** Journalism aspects of public opinion and propaganda, the impact of mass communications media on the formation of public opinion. Techniques of polling and testing public opinion.

**53.353 PUBLICITY AND PUBLIC RELATIONS (3)** Provides an awareness and understanding of public relations activities. Students learn publicity techniques and how to organize campaigns.

**53.356 FEATURE WRITING (3)** Preparation of long and short articles, editorials and news features. Prerequisite: One English Composition course and 53.355.

**53.358 (253) NEWS EDITING AND COPYREADING (3)** Practice in editing, headline writing, page make-up and use of pictures and type in newspapers, and editing copy for use on radio and television. Prerequisite: 53.355 or 53.356.

**53.361 ADVANCED TELEVISION TECHNIQUES (3)** Advanced techniques in television production and performance for commercial and educational television. Major emphasis on directing. Prerequisite: 53.261 or consent of instructor.

**53.363 (263) HISTORY OF THE FILM TO THE PRESENT (3)** Survey of the Motion Picture from its conceptions to the distribution of sound films. Prerequisite: 53.212.

**53.364 (264) AESTHETICS OF THE FILM (3)** Survey of the Film theory and aesthetics of silent, sound and avant-garde motion pictures. Prerequisite: 53.363 or consent of instructor.

**53.367 TELEVISION WRITING (3)** Training and practice in writing commercials, documentaries and plays for the specific medium of television-commercial and educational. Prerequisite: ENGL. 30.102, ENGL. 30.204 and 53.261.

**53.385 MASS MEDIA IN MODERN SOCIETY (3)** Seminar in mass media, concentrating on audience, content and effects of the media. Prerequisite: 53.151 and 53.212.

**53.475 FILM WORKSHOP (3)** Designed primarily to provide experienced or future teachers with background about film so that they may better help pupils to become informed about and to develop critical reactions to the films they view. Prerequisite: Consent of instructor.

**53.485 NEWSPAPER WORKSHOP (3)** Sponsored by the member newspapers of the Maryland-Delaware, D.C. Press Association, and Towson State College. Designed primarily to provide teachers with background about the mass media so that they may better help pupils to become informed and develop intelligent opinions on current affairs. Students will be expected to take two afternoon field trips. Class limit 100. Prerequisite: Consent of instructor.

**53.491 INDEPENDENT STUDY IN FILM (1-6)** Independent work in film production and research. Production students may work independently, with campus production unit or with professional production company. Prerequisite: 53.212, 53.267 or consent of instructor.

**53.493 INDEPENDENT STUDY IN RADIO (1-6)** Independent study in selected areas of radio through directed readings, projects in conjunction with the operation of the student radio station or work with a full-time professional in the community. Selected students may work as laboratory assistants in the 53.265 Basic Radio Production class. Prerequisite: 53.265 and/or participation as staff member on a campus or community radio.

**53.495 INDEPENDENT STUDY IN TELEVISION (1-6)** Independent study in selected areas of television production and research through selected readings, projects, papers and seminars. Prerequisite: 53.361 and consent of instructor.

**53.496 INDEPENDENT STUDY IN JOURNALISM (1-6)** Independent study in the varied aspects of newspaper writing. Opportunity will be provided to work under the guidance of professional newspapermen connected with the Baltimore papers. Prerequisite: Open by invitation of the department to qualified students.

**53.497 INDEPENDENT STUDY IN PUBLIC RELATIONS (1-6)** Independent study in selected areas of public relations through directed readings, projects, papers or seminars. When possible, opportunity will be provided for the student to work outside the classroom, under the cooperative guidance of his instructor and a full-time professional public relations person in the field of the student's choice. Prerequisite: Open by invitation of the department to qualified students.

## ***SPEECH PATHOLOGY AND AUDIOLOGY COURSES (SPPA)***

### ***Upper Division — Undergraduate and Graduate***

**87.302 SPEECH PATHOLOGY I (3)** Academic information and clinical methods for the problems of articulation and delayed language. Prerequisite: 84.310, 87.105 or consent of instructor.

**87.304 SPEECH PATHOLOGY II (3)** Academic information and clinical methods for the problems of cleft palate and voice disorders. Prerequisite: 87.105, 84.310 or consent of instructor.

**87.305 STUTTERING — ETIOLOGY AND THERAPY (3)** Analysis of etiologies, symptoms and therapeutic management of stuttering. Prerequisite: Consent of instructor.

**87.306 SPEECH PATHOLOGY III (3)** Academic information and clinical methods for the problems of aphasia, mental retardation, and cerebral palsy. Prerequisite: 84.402 or consent of instructor.

**87.400 ANATOMY AND PHYSIOLOGY OF THE AUDITORY AND VOCAL MECHANISM (3)** Analysis of the anatomical structures involved in the communication processes of Speech, Language and Hearing. Analysis of the functioning of these structures. Lectures and laboratory sessions will be required. Prerequisite: 87.105.

**87.404 PROFESSIONAL PROGRAM, PROBLEMS AND RELATIONSHIPS (3)** Organization and administration of speech pathology and audiology programs in various professional settings; personal, professional and community relationships and responsibilities. Observation will be required. Prerequisite: 87.487 or consent of instructor.

**87.407 AURAL HABILITATION/REHABILITATION (3)** Theories, objectives and techniques for the teaching of speech reading, speech conservation and auditory training. Observation and practice will be required. Prerequisite: 87.241.

**87.408 SPECIAL PROBLEMS SEMINAR — CLEFT PALATE (3)** A multidisciplinary approach to all aspects of the patient with a cleft palate which would include lectures on etiology, embryology, speech patterns, otological and audiological considerations, dental and plastic reconstruction, speech therapy and follow-up. Prerequisite: 87.304 or consent of instructor.

**87.409 SPEECH AND LANGUAGE FOR THE DEAF CHILD (3)** Principles and techniques for developing speech and language in the deaf child using whole-word and analytical methods; consideration of multiple handicaps; demonstration and observation will be required. Prerequisite: 87.105, 87.241, 87.407 or consent of instructor.



**87.410 SPECIAL PROBLEMS PRACTICUM CLEFT PALATE (3)** Clinical practice in all aspects of the patient with a cleft palate. Prerequisite: 87.306 or professional experience or consent of instructor.

**87.411 SEMINAR/WORKSHOP IN SPEECH PATHOLOGY AND AUDIOLOGY-SPEECH AND LANGUAGE DEVELOPMENT FOR THE SPEECH AND LANGUAGE DEPRIVED (6)** Diagnostic, therapeutic and methods for the management of children who are deprived in the areas of speech and language. Prerequisite: Professional experience and/or consent of instructor.

**87.414 SPECIAL PROBLEMS SEMINAR (3)** Concentrated investigation of particular problems in the field of speech pathology and audiology. The problems will vary each semester the course is offered. Individuals having professional experience may receive credit through a proficiency exam. Prerequisite: Professional experience or at the invitation of the department.

**87.421 SEMINAR/WORKSHOP - HEARING IMPAIRED (6)** Psychology, science and anatomy of the hearing mechanism will be reviewed. Investigation of communication, educational, vocational, psychological and social problems of the hearing impaired as these relate to personal adjustment in today's society. The study of the principles and techniques of teaching the hearing impaired.

**87.441 INDUSTRIAL AND ENVIRONMENTAL AUDIOLOGY (3)** This course is designed to provide extensive information in the area of noise and its effect on hearing. Industrial, Community and Environmental aspects will be covered including hearing conservation programs. Prerequisite: Consent of instructor.

**87.451 AUDIOLOGICAL MANAGEMENT OF THE EXCEPTIONAL CHILD (3)** Principles and techniques for identifying and evaluating hearing impaired children; consideration of multiple handicaps, demonstrations and practice. Prerequisite: 87.401 or professional experience, or consent of instructor.

**87.461 HEARING AID SELECTION PROCEDURES AND SPEECH AUDIOMETRY (3)** Nature and types of amplifying systems used with the hearing impaired. Electroacoustic characteristics, principles and methods of selection and usage. Use of speech signals in evaluating the auditory system. Prerequisite: Consent of instructor.

**87.481 DIALECTS OF ETHNIC GROUPS IN AMERICAN SOCIETY (3)** Academic information that will help the student acquire an understanding of the cultural and social aspects of certain ethnic groups in American society and train the student in assessment of divergent language patterns and effective management of a language program based on the individual needs of the population served. Prerequisite: 87.302.

**87.485 VOICE AND ARTICULATION SEMINAR (3)** Investigation of nature and treatment of organic and functional voice and articulation disorders in children and adults, including vocal strain, nodules, carcinoma, management of the laryngectomized, and dysarthria. Prerequisite: 87.308 and 87.487.

**87.486 CLINICAL OBSERVATION AND TECHNIQUES (3)** Observation and application of techniques essential to the management of hearing, language, and speech disorders. Prerequisite: 87.302, 87.304.

**87.487 CLINICAL PRACTICUM I (1-3)** Clinical observation of and practice in therapeutic procedures with various types of speech, language and/or hearing disorders in the Towson State College Speech and Hearing Clinic. Students may also be assigned a practicum in the Lida Lee Tall Learning Resources Center and/or various centers that offer speech, language or hearing therapy, such as hospitals or private agencies. (Credit is for 2 semester hours per semester, except summer.) Prerequisite: 87.302 or consent of instructor.

**87.488 CLINICAL PRACTICUM II (6-9)** Students are assigned to an approved therapy program for observation and practice teaching. The student will earn a minimum of 150 of the 300 clinical clock hours required for certification. Prerequisite: 3 credits of 87.487.

**87.489 CLINICAL COUNSELING IN AUDIOLOGY AND SPEECH PATHOLOGY (3)** Systems of directive and nondirective counseling utilized by speech and hearing clinicians for the management of organic and nonorganic disorders. Techniques of interviewing, case history recording, and the conditioning of semantic reactions through interpersonal interaction. Prerequisite: 87.241 and 87.304

**87.496 INDEPENDENT STUDY IN SPEECH PATHOLOGY AND AUDIOLOGY (1-4)** Independent study in selected areas of Speech Pathology and Audiology through projects, papers and seminars. A portion of the course may involve assisting in laboratory experiences in connection with Speech Pathology and Audiology course(s). Prerequisite: Invitation of department only and upper division standing

**87.497 DIRECTED READINGS IN SPEECH PATHOLOGY AND AUDIOLOGY (1-4)** Directed readings in selected areas of Speech Pathology and Audiology in order to provide for the individual a comprehensive coverage of a special area within the broader range of communication disorders or to meet special needs of students. Prerequisite: Upper division standing and by invitation of the department

### *Graduate Division*

**87.501 LANGUAGE DISORDERS OF CHILDREN (3)** Investigation of mental retardation, emotional disturbance and hearing loss in children in terms of speech and language disorders. Prerequisite: 87.105, 87.302

**87.505 NEUROPATHOLOGIES OF SPEECH (3)** Etiology, nature and management of cerebral palsy and minimal brain damage in children, and dysphasia in adults. Prerequisite: 87.306 and 87.487

**87.507 DIAGNOSTIC METHODS IN SPEECH PATHOLOGY (3)** Standardized and non-standardized techniques for testing the speech, language and general intellectual functioning of child and adults. Practicum experience in speech evaluations and report writing. Prerequisite: 87.485, 87.505

**87.511 APPLICATION OF LINGUISTICS TO SPEECH PATHOLOGY (3)** Investigation of traditional and contemporary research in the area of psycholinguistics and generative grammar. Application of this to diagnosis and management of those with language disorders. Prerequisite: Graduate standing

**87.513 (495) INTRODUCTION TO RESEARCH IN SPEECH PATHOLOGY AND AUDIOLOGY (1)** Discussion of research methods, techniques and needs in speech pathology and audiology. Reading and understanding professional journal articles. Prerequisite: Consent of instructor

**87.521 DIAGNOSIS OF DISORDERS OF THE AUDITORY SYSTEM (3)** This advanced course is designed to provide graduate students in Audiology & Speech Pathology with the history, rationale and procedures of audiologically delineating disorders of the auditory system. Prerequisite: Consent of instructor

**87.531 PSYCHOACOUSTIC INSTRUMENTATION & CALIBRATION (3)** This advanced course is intended to provide graduate students in Audiology and Speech Pathology with an overview of the devices which form a core of equipment for auditory investigation and some of the principles and problems which accompany their use. Prerequisite: Consent of instructor

**87.541 AUDIOLOGY SEMINAR — PSYCHOACOUSTICS (3)** This advanced course is intended to provide graduate students in audiology with an opportunity to pursue in-depth studies in psychoacoustics. Prerequisite: Consent of instructor

**87.542 AUDIOLOGY SEMINAR — BIOACOUSTICS (3)** This advanced course is intended to provide graduate students with an opportunity to pursue in-depth studies in bioacoustics. Prerequisite: Consent of instructor

**87.543 AUDIOLOGY SEMINAR — NEUROPHYSIOLOGY OF HEARING (3)** This advanced course is intended to provide graduate students with an opportunity to pursue in-depth studies in neurophysiology of audition. Prerequisite: Consent of instructor

**87.544 AUDIOLOGY SEMINAR — CURRENT TOPICS IN AUDITION (3)** This advanced course is intended to provide graduate students with an opportunity to pursue in-depth studies of current interest in audition. Prerequisite: Consent of instructor.

**87.645 ADVANCED CLINICAL PRACTICE (2)** Experience in the College Clinic as well as externship in public schools, hospital clinics, and rehabilitation settings with the speech defective. Introduction to the supervision of undergraduate trainees. Prerequisite: 87.487 and/or professional experience.

**87.695 GRADUATE RESEARCH PAPER IN SPEECH PATHOLOGY AND AUDIOLOGY (3)** Preparation of extensive paper dealing with a current area of research in the field or with the results of a clinical experiment. Prerequisite: Consent of Department.

**87.696 (601) INDEPENDENT STUDY IN SPEECH PATHOLOGY AND AUDIOLOGY (3)** Preparation of extensive paper dealing with professional clinical experiences. Discussion of techniques, innovations, methods employed and recommendations for improvement. Prerequisite: Professional experience.

### *General Speech Courses (SPCH)*

#### *Upper Division — Undergraduate and Graduate*

**84.304 PERSUASION (3)** Rhetorical and psychological principles of influencing individuals and groups, application of persuasive principles in speaking performance, analysis of the use of persuasion in formal and informal communication. Prerequisite: 84.203 or consent of instructor.

**84.310 PHONETICS OF AMERICAN ENGLISH (3)** Analysis of speech sounds of American English and the use of phonetic symbols to record them. Emphasizes ear training, phonetic transcription, and language recordings. Prerequisite: 84.131 or 84.106 or 87.105.

**84.320 READERS THEATRE (3)** Oral interpretation of selections from dramatic literature and individual and group reading. Includes principles of selecting, cutting, and programming in literature. Prerequisite: 84.221 and consent of instructor.

**84.395 INDEPENDENT STUDY IN ORAL INTERPRETATION (1-6)** Independent study in selected areas of oral interpretation through directed readings, projects, papers, or seminars. Open by invitation of the Speech Department to qualified students. Prerequisite: 84.221, invitation of the Department of Communication Arts and Sciences and consent of chosen instructor.

**84.402 HEARING AND SPEECH SCIENCE (3)** Lectures, readings and demonstrations designed to introduce the student to the various physical and psychological parameters of speech and hearing and how they are studied. Prerequisite: 84.310, 87.400.

**84.403 CLASSICAL AND MODERN RHETORIC (3)** Survey of rhetorical theory from Isocrates to contemporary communication theorists. Particular attention is given to Aristotle, Cicero and Quintilian. Designed to develop standards of rhetorical criticism.

**84.405 AMERICAN PUBLIC ADDRESS (3)** History and criticism of two centuries of public address in the United States, the great speakers, their historical environment, their beliefs and effects on American life. Prerequisite: 84.203 HIST 40.145 or consent of instructor.

**84.406 BRITISH PUBLIC ADDRESS (3)** Public address in Great Britain, the great speakers, their historical environment, their beliefs and effects on American life. Prerequisites: 84.203 or HIST 40.241 or consent of instructor.

**84.421 EXPERIMENTAL PHONETICS (3)** An advanced course in the study of Phonetic Science. Concerned with the application of experimental methods to study and research in voice and phonetics, especially spectrographic analysis. Includes critical review of research literature in Scientific Phonetics. Prerequisite: 84 310 or consent of instructor.

**84.423 ADVANCED ORAL INTERPRETATION OF LITERATURE (3)** Advanced theory and practice of oral interpretation with emphasis placed upon the relationship of the dramatic structure to the interpreter's performance. Prerequisite: 84 221 or consent of instructor.

**84.432 THE COACHING AND MANAGEMENT OF FORENSICS (3)** 2nd semester of even-numbered years only. Problems of organizing, financing, and directing the forensic program in schools and colleges. Coaching, schedules, and techniques for debate and individual speech event. Competing philosophies of forensics and secondary school and college-level forensic organization are studied.

**84.493 INDEPENDENT STUDY IN READERS THEATRE (1-6)** Independent study in selected areas of Readers theatre through directed readings, projects, papers of seminars. Open by invitation of the Department of Communication Arts and Sciences to qualified students.

**84.495 INDEPENDENT STUDY IN PUBLIC ADDRESS (1-6)** Independent study in selected areas of public address through directed readings, projects, papers, or seminars. Open by invitation of the Department of Communication Arts and Sciences, to qualified students.

## Economics and Political Science

Chairperson: Michael Grossman

### *ECONOMICS COURSES (ECON)*

#### *Upper Division — Undergraduate and Graduate*

**24.481 INDEPENDENT STUDY (1-3)** Individual and supervised study in selected areas of economics. Prerequisite: Admission by consent of instructor.

**24.485 PROSEMINAR ON ECONOMICS ISSUES (3)** Research and writing of paper on an economic issue selected by the instructor. Prerequisites: 24.309, 24.323, and 24.335.

**24.489 WORKSHOP ON ECONOMIC EDUCATION (3)** Designed to help teachers and school administrators gain a better understanding of the economic workings of the society in which we live. Prerequisite: Consent of instructor.

### *POLITICAL SCIENCE COURSES (POSC)*

#### *Upper Division — Undergraduate and Graduate*

All courses may be taken without prerequisites if consent of instructor is obtained.

**68.303 THEORY OF INTERNATIONAL POLITICS (3)** The theories of mutual relations of states. Elements of national power; international politics as a struggle for power. Restraints upon the struggle for power. Prerequisite: HIST 40 264 or 68 107.

**68.305 URBAN GOVERNMENT AND POLITICS (3)** The political history of American cities from the eighteenth century through the recent reform movement. City charters, home rule, types of executives, political machines. The metropolitan area. Prerequisite: 68.103

**68.307 (315) CONTEMPORARY INTERNATIONAL POLITICS (3)** An examination of the conduct of international relations by the Western, the Communist, and the non-aligned blocs in the Post-World War period. Prerequisite: 68.303

**68.337 COMPARATIVE GOVERNMENT OF FOREIGN POWERS: THE WESTERN WORLD (3)** An examination of the Problems of Modernization and stable constitutional rule in England, France, Italy and Germany. Prerequisite: 68.137, 68.101

**68.338 (339) COMPARATIVE GOVERNMENT OF FOREIGN POWERS: RUSSIA AND THE EAST (3)** Constitutional and legal processes of Russia, Japan, China and other Eastern powers. Prerequisite: 68.137 or 68.101

**68.339 COMPARATIVE POLITICAL SYSTEMS (3)** The course will attempt to bring together the analytical concepts and methodological techniques that may be applied to the study of political systems in a comparative sense. Prerequisite: 68.101 or 68.103 or 68.137

**68.341 AFRICAN GOVERNMENT AND POLITICS (3)** An examination of the rise of African Nationalism and the emergence of new states in Africa. Attention is directed to the influence of colonial rule and traditional political institutions on the development of party politics patterns of government, and Pan-African ideas. Trends towards military rule, political problems of independent Africa, and the efforts to build strong and viable political systems are emphasized. Prerequisite: Any introductory political science course or consent of instructor

**68.351 THE GOVERNMENT AND POLITICS OF LATIN AMERICA (3)** The process of conflict resolution in Latin America stressing the internal dynamics of the political system. Emphasis on Mexico, Brazil, Chile, Colombia and Argentina. Prerequisites: 68.101 or 68.137

**68.355 THE LATIN AMERICAN POLICY OF THE UNITED STATES (3)** Diplomatic and cultural relations between the United States and Latin America from independence to the present. The Monroe Doctrine, the Pan-American Movement, the Good Neighbor Policy, Castroism, and the Alliance for Progress. Prerequisite: 68.101 or 68.137.

**68.359 POLITICAL AND SOCIAL ASPECTS OF REVOLUTION (3)** Nature and function of violence and revolution in modern social systems. Prerequisites: 68.101 or 68.137

**68.361 POLITICAL BEHAVIOR (3)** The purpose of this course is to introduce the student to the substantive theory and methodology of behavioral analysis. Topics include voting behavior, elite behavior, and an analysis of types of political conflict. Prerequisite: 68.101 or consent of instructor.

**68.375 PUBLIC ADMINISTRATION (3)** Administration as a central element of contemporary society, with special reference to the problems of government organization, control, personnel, finance, and public relations. Prerequisite: 68.103

**68.381 THE PRESIDENCY (3)** A discussion of the origin of the office, the selection of the president and policy-making in the executive branch. Prerequisite: 68.103.

**68.383 CONGRESS (3)** An investigation of the relations of Congress with the other branches of government and with the political parties and interest groups. The course also examines the relationships between a member of Congress and his constituency as well as the internal dynamics of Congress. Prerequisite: 68.103

**68.401 (301) INTRODUCTION TO LAW (3)** The legal processes in the United States. This course is designed primarily for the liberal arts student. Prerequisite: One course of introductory political science.

**68.417 AMERICAN POLITICAL PARTIES (3)** Origin and development of the American two-party system. The activities of pressure groups and organizations, and their effects upon the party system. Prerequisite: 68.103.

**68.418 CONSTITUTIONAL LAW (3)** A study of the constitution of the United States based on leading judicial decisions interpreting the constitution and statutes from 1789 to the present. Prerequisite: 68.103

**68.427 (426) POLITICAL THEORY I (3)** Political thought in the West from the Greeks to the end of the sixteenth century. Prerequisites: 68.101 or consent of instructor

**68.428 (427) POLITICAL THEORY II (3)** Political philosophers and their writings since the sixteenth century. Attention given to the conflict of ideologies in the twentieth century. Prerequisites: HIST 40.241, 242 or consent of instructor

**68.430 POLITICAL IDEAS OF SOCIALISM AND COMMUNISM (3)** Selected topics in the political theory of socialism and communism including socialism and the ancient regimes, socialism and political organization, Russian, Leninist and Stalinist theory, and socialist ideas in the post cold war period. Prerequisite: 68.428

**68.432 UNITED STATES — SOVIET RELATIONS (3)** Diplomatic, cultural, and economic relations between the USSR and the US. Emphasis on the period since 1933 with a careful study of the effects of the Second World War upon the balance of power. Prerequisite: Any 100 level course, or consent of instructor.

**68.435 AFRICA IN WORLD POLITICS (3)** The role of African nations in the nuclear age, and their efforts to achieve unity. Prerequisite: 68.341 or consent of instructor.

**68.439 (440) UNITED STATES FOREIGN POLICY IN SOUTHEAST ASIA (3)** American foreign policy in Southeast Asia in the Post World War II period. Prerequisite: 68.303, and HIST 40.110, 146 or consent of instructor.

**68.441 CONTEMPORARY UNITED STATES — WESTERN EUROPEAN RELATIONS (3)** Emphasis will be on NATO, the European Economic Community, and the Anglo-American efforts to create an Atlantic partnership between Europe and the United States. Prerequisites: 68.103 or 137 or consent of instructor

**68.445 UNITED STATES FOREIGN POLICY IN SOUTH ASIA (3)** A discussion of American foreign policy in South Asia mainly since 1945. Emphasis will be on India and Pakistan. Prerequisite: 68.303, or consent of instructor

**68.450 GROUP POLITICS AND PUBLIC OPINION (3)** The role of pressure groups and public opinion in the American Political system. Prerequisite: Nine hours of political science or consent of instructor.

**68.455-456 INTERNATIONAL LAW AND ORGANIZATION I, II (3,3)** An examination of the theories and the development of international law up to the present. The character of the modern state system, the role of international organizations, and international law and resort to force. Prerequisite: 68.303 and HIST 40.242 or consent of instructor.

**68.461 RESEARCH METHODS IN POLITICAL BEHAVIOR (3)** The major emphasis in this course will be on the use of quantitative techniques in political research. Topics include survey research, the use of computers, and statistical analysis. Prerequisite: Any course at 100 level.

**68.465 EDITORIAL WORK - TOWSON STATE JOURNAL OF INTERNATIONAL AFFAIRS (1 per semester - 4 semester limit)** Members of the Editorial Board of the Towson State Journal of International Affairs prepare the issues of that Journal under the supervision of the Faculty Advisors. Prerequisite: Admission by consent of the instructor only

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**68.481 INDEPENDENT STUDY (3)** Individual and supervised study in selected areas of political science. Prerequisite: Consent of instructor.

**68.485 DEMOCRATIC THEORY SEMINAR (3)** This course attempts to trace the sources of Democratic Theory to their 16th Century origins and to analyze the variants to that theory which have been proposed since that time. Prerequisite: 68.428.

**68.487 SEMINAR IN POLITICAL SCIENCE (3)** Various methods and techniques of research in political science, culminating in the preparation of a seminar paper. Prerequisite: Eighteen semester hours in political science, or consent of instructor.

**68.491 SEMINAR IN CONTEMPORARY UNITED STATES FOREIGN POLICY (3)** An examination of the nature, basis, and instruments of American foreign policy in the contemporary age. The formulation, control, and execution of American foreign policy will also be noted. Prerequisite: 68.303 and HIST 40.146 or consent of instructor.

**68.497 PRACTICUM IN POLITICS (3-9)** This course is designed to familiarize students with practical working of political and governmental institutions. The flexibility in time and credit arrangements will allow a variety of political practica (or internships) in which students can combine observation of "politics in action" with discussions and generalization of the observed. Prerequisite: Major in political science and consent of the department.

## Education

Chairperson and Director of Teacher Education: Billy D. Hauserman

Chairperson of Early Childhood Education: Frances Bond

Chairperson of Elementary Education: Richard J. Williams

Chairperson of Secondary Education and Foundations of Education:

Director of Field Services: Michael H. Jessup

Director of Reading: Joseph P. Gutkoska

Director of Laboratory Experiences: Chandler Barbour

Associate Director of Laboratory Experiences: James Binko

Director of Research at Learning Resources Center: Norma Hauserman

Director of Professional Programs: Royce W. Van Norman

### *GRADUATE STUDIES COORDINATORS*

Secondary Education Program: Grayson S. Burrier

Elementary Education Program: Regina I. Fitzgerald

Reading Program: Joseph P. Gutkoska

Early Childhood Education Program: Dell Kjer

### *EARLY CHILDHOOD EDUCATION COURSES (EDUC)*

#### *Upper Division — Undergraduate and Graduate*

**25.403 THE CURRICULUM IN PRIMARY EDUCATION (3)** The child, curriculum content, methods and materials of teaching, and program organization in the primary school years. Prerequisite: 6 semester hours of Early Childhood Education.

**25.411 PARENTS AND TEACHERS: PARTNERS IN EARLY CHILDHOOD EDUCATION (3)** The development of a rationale for improved parent-teacher relationships in early childhood education programs. The role of paraprofessionals and specialists and volunteers. Observation, participation, home and school visits by teachers and parents functioning as a team. Prerequisite: Six hours of Early Childhood Education.

**25.413 INFANTS AND CHILDREN UNDER THREE (3)** Nature of the infant and very young child. Types of programs providing care of infants and children under three. Focus on developmental needs. Organization, curriculum, and methods of working with parents and children. Observations. Resource persons from allied agencies. Prerequisites: 6 hours Psychology; 6 hours Early Childhood Education; or approval of Department of Early Childhood Education.

**25.415 THE DAY CARE CENTER (3)** An interdisciplinary course designed to prepare day care personnel. Resource persons from related agencies will participate. Topics include purposes of day care, problems of organization, administration and supervision, records, programs, community interaction, and parent relations. Field trips and observation of day care centers. Prerequisite: 6 hours of Early Childhood Education or approval of Department of Early Childhood Education.

**25.417 LEARNING DISABILITIES IN YOUNG CHILDREN (3)** Survey of the nature of learning disabilities in the young child, theoretical positions, current research; neurological aspects involved; major categories, evaluative and remediation procedures are presented. Seminar-discussion and programmed units. Prerequisites: 6 hours of psychology and 6 hours of Early Childhood Education.

**25.419 MEASUREMENT AND EVALUATION IN EARLY CHILDHOOD EDUCATION (3)** Backgrounds and principles of assessment in early childhood education. Statistical concepts. Types of instruments and methods for evaluating growth and achievement of young children. Prerequisites: 6 hours of psychology and 6 hours of Early Childhood Education.

**25.421 (26.381) PROBLEMS IN EARLY CHILDHOOD EDUCATION (3)** Research findings used as a basis for program planning in nursery school, kindergarten and primary grades; current trends and issues are considered. Prerequisite: Student teaching and/or teaching experience in preschool or primary grades; Approval of Department of Early Childhood Education.]

**25.423 (26.391) LABORATORY EXPERIENCES IN EARLY CHILDHOOD (3)** Classroom experiences with children in preschool and primary grades in a variety of teaching-learning situations. Analysis of observations in light of current research. Concurrent with 25.421. Prerequisites: approval of Department of Early Childhood Education.

**25.425 THE YOUNG BLACK CHILD IN A MULTICULTURAL SOCIETY (3)** Exploration of the influence of caste, class and culture on the development of young children, with implications for Early Childhood Education. Focus on the young black child. Prerequisite: 6 hours of psychology and/or sociology; 6 hours of Early Childhood Education or approval of Department of Early Childhood Education.

**25.494 TRAVEL AND STUDY — EARLY CHILDHOOD EDUCATION (1-6)** A field study, including cultural tours in selected foreign countries, of current Early Childhood Education programs, facilities, and trends. Lectures, observations, and personal interactions. Required participation in planned educational activities and a follow-up paper. Prerequisites: Graduate standing, or consent of the departmental chairman. Consent of graduate program coordinator required for graduate degree credit.

**25.495 INDEPENDENT STUDY IN EDUCATION: EARLY CHILDHOOD EDUCATION (1-4)** An opportunity for specially qualified students to undertake research problems of study projects relevant to their interest and training under the direction of a staff member. Graduate credit by consent of Graduate Program Coordinator only. Prerequisite: approval of appropriate Program Chairperson.

**25.496 DIRECTED READING: EARLY CHILDHOOD EDUCATION (1-4)** Independent reading in selected areas of Early Childhood Education in order to provide for the individual a comprehensive coverage or to meet special needs. By invitation of the Department. Graduate credit by consent of Graduate Program Coordinator only.

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## *Graduate Division*

**25.509 (26.509) GROWTH AND DEVELOPMENT OF YOUNG CHILDREN (3)** Study of findings of current research in growth and development of young children, methods of studying and evaluating behavior, implications of case study data for curriculum improvement. Prerequisites: PSYC 70.511 and consent of the Department of Early Childhood Education.

**25.517 LEARNING DISABILITIES IN YOUNG CHILDREN — ADVANCED (3)** A clinically oriented course emphasizing psycho-diagnostic techniques designed to meet the needs of experienced teachers who wish special training in identification and remediation of the learning disabled child. Prerequisite: 6 hours Early Childhood Education (3 hours must be 25.417 or permission of instructor), 6 hours Psychology (Child and Educational Psychology.)

**25.521 (26.521) READING IN EARLY CHILDHOOD EDUCATION: ADVANCED (3)** Emphasis on contemporary issues, advanced interpretative and critical evaluations of research in reading instruction in light of basic needs, developmental levels, and individual differences in young children. Prerequisites: Undergraduate course in reading and consent of the Department of Early Childhood Education.

**25.547 (26.547) THE TEACHING PROCESS: EARLY CHILDHOOD EDUCATION (3)** Study of recent theories, methods, and findings in research on the teaching process. Analysis of teaching behaviors and exploration of teaching strategies in educational programs for young children. Prerequisites: Teaching experience, PSYC 70.511 or 29.501, and consent of Department of Early Childhood Education.

**25.553 (26.553) PERCEPTUAL AND COGNITIVE DEVELOPMENT OF YOUNG CHILDREN (3)** Survey of significant research affecting the theory and programs of education for children ages three to eight years. Prerequisites: PSYC 70.511 and/or 25.509 and consent of Department of Early Childhood Education.

**25.573 (26.573) SEMINAR IN EARLY CHILDHOOD EDUCATION (3)** Seminar approach to current practices and trends in curriculum, materials, methods, and organization of educational programs for children ages three through eight years. A seminar paper is required. Prerequisites: 9 hours of graduate work in Early Childhood Education and 29.691.

**25.599 (26.599) MASTER'S THESIS IN EARLY CHILDHOOD EDUCATION (3)**

## *ELEMENTARY EDUCATION COURSES (EDUC)*

### *Upper Division — Undergraduate and Graduate*

**26.427 (26.453) READING AND OTHER LANGUAGE ARTS-ADVANCED (3)** Application of theory and research to the teaching of reading and the other language arts. Prerequisites: 26.321, 26.323, or 26.462.

**26.429 (454) METHODS AND PRINCIPLES OF READING INSTRUCTION — ADVANCED (3)** Principles involved in building a developmental reading program; prevention of reading difficulties; methods of remedial reading. Prerequisite: 26.323 or 26.462.

**26.441 CURRICULUM DEVELOPMENT IN THE ELEMENTARY SCHOOL (3)** The child and his curriculum. The teacher's role in curriculum as a process. Principles and philosophies of curriculum development. Objectives, practices, materials, and evaluation trends. Prerequisite: 26.497.

**26.457 ENGLISH FOR THE NON-ENGLISH SPEAKING CHILD (3)** Methods of teaching English to Elementary school children whose native tongue is another language. Prerequisites: Elementary Language Arts Methods Course or Teaching Experiences or Consent of Instructor.

**26.494 TRAVEL AND STUDY: ELEMENTARY EDUCATION (1-6)** Study abroad of educational facilities, programs, or practices, or selected projects in Elementary Education topics. By special arrangement with program chairman and sponsoring instructors. Graduate credit given only with consent of graduate coordinator.

**26.495 INDEPENDENT STUDY IN EDUCATION: ELEMENTARY (1-4)** An opportunity for especially qualified students to undertake research problems or study projects relevant to their interest and training under the direction of a staff member. Graduate credit by consent of Graduate Program Coordinator only. Prerequisite: Approval of Program Chairperson.

**26.496 DIRECTED READING: ELEMENTARY EDUCATION (1-4)** Independent reading in selected areas of Elementary Education in order to provide for the individual a comprehensive coverage or to meet special needs. By invitation of the Department to major students. Graduate credit by consent of graduate Program Coordinator only.

### *Graduate Division*

**76.585 SEMINAR IN ELEMENTARY SCHOOL SCIENCE (3)** Seminar approach to current practices and trends in organizing, teaching and improving programs in elementary school science. Each student conducts a limited research on some aspect of science teaching. Prerequisite: Elementary Teaching Experience.

**78.585 SEMINAR IN ELEMENTARY SCHOOL SOCIAL STUDIES (3)** Trends, content, issues, and materials involved in the teaching of social studies. Each student will be expected to explore in depth one aspect of the subject and present his findings to the group.

**26.616 (516) THE ADMINISTRATION OF THE ELEMENTARY SCHOOL (3)** Analysis of principles of elementary school administration, the administrator's roles and responsibilities, human relations and personnel management, public relations, management of the school unit and curriculum. Prerequisites: Three years teaching experience, teacher certification and nine hours of graduate credit.

**26.647 THE TEACHING PROCESS: ELEMENTARY EDUCATION (3)** Study of recent theories, methods, and findings in research on the teaching process. Analysis of teaching behaviors and exploration of teaching strategies in educational programs for elementary children. Prerequisites: Teaching experience and PSYC 70 511.

**26.648 (26.007) INDIVIDUALIZING LEARNING IN THE ELEMENTARY SCHOOL (3)** Theory of individualizing learning and restructuring of organizational patterns, with emphasis on behavioral objectives, learning centers, listening stations, task folders, and media centers. A project is required. Prerequisites: Certification and Teaching Experience, or consent of instructor.

**26.665 (525) THEORETICAL AND PRACTICAL BASES OF CURRICULUM DEVELOPMENT IN THE ELEMENTARY SCHOOL (3)** History of curriculum development in the elementary school; basic considerations affecting curriculum development, patterns of organization, objectives, practices, and evaluation, problems in curriculum development. Prerequisite: Consent of program coordinator.

**26.675 (575) SEMINAR IN ELEMENTARY EDUCATION (3)** Scientific investigation of selected aspects of education with emphasis on classroom application. A paper involving description and evaluation of the investigation will be required. Prerequisite: 30 hours of graduate work including 29 691.

**26.681 (581) SEMINAR IN ELEMENTARY SUPERVISION (3)** Role of the supervisor; supervisory practices and techniques. Students may concentrate in areas related to their professional interests. Prerequisite: Nine hours of graduate work.

**26.699 MASTER'S THESIS IN ELEMENTARY EDUCATION.**

### *SECONDARY EDUCATION COURSES (EDFS)*

#### *Upper Division — Undergraduate and Graduate*

**27.358 TEACHING COMPOSITION IN THE SECONDARY SCHOOL (3)** This course includes: grammar vocabularies, motivational techniques, evaluation, student publications, varieties of purposes for writing, oral composition, laboratory experiences and individual problem analysis. Prerequisite: 27.357 (30 379) or consent of instructor.

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**27.359 CONTEMPORARY MATERIALS FOR TEACHING ENGLISH IN SECONDARY SCHOOLS (3)** Application of new materials designed for teaching the language arts in the secondary school including records, films, SRA materials, programmed learning, and television. Prerequisite: 27.357 or consent of instructor.

**27.360 (26.365) TEACHING READING IN THE SECONDARY SCHOOL (3)** General developmental reading skills, identification, diagnosis, and remediation of reading problems, comprehension, vocabulary building, word-study skills.

**27.421 (441) THE JUNIOR HIGH SCHOOL (3)** Principles, purposes, functions, and characteristics of the Junior High School, with emphasis upon its organization and curriculum. Prerequisites: 26.361 or 27.319 or 27.341.

**27.423 (443) THE MIDDLE SCHOOL (3)** Functions and characteristics of the middle school, emphasis on nature of transescent youth (ages 10-14), curriculum, and organizational patterns. Prerequisite: 26.361, or 26.462, or 27.319, or 27.341.

**27.425 (27.445) TEACHING IN THE MIDDLE SCHOOL (3)** Instruction in the methods required for teaching in the middle school. An individualized program of instruction, readings, observations and teaching experiences will be planned for each student. Prerequisite: Teacher experience, student teaching, or concurrent with student teaching.

**27.451 (27.001) TEACHING THE SLOW LEARNER IN THE SECONDARY SCHOOL (3)** Explores motivational devices, discipline, planning instruction, testing and evaluation for the slow learner as well as techniques for developing an adequate self-concept and maintaining a positive classroom atmosphere. Prerequisite: Teaching experience, student teaching, or consent of instructor.

**27.457 METHODS OF TEACHING ENGLISH AS A SECOND LANGUAGE (3)** Teaching teachers methods of teaching English as a second language. Attention is given to the use of visuals, contrastive analysis, drill techniques, and other methods and resources. Prerequisites: Teaching experience or consent of instructor.

**27.461 TEACHING READING IN THE SECONDARY CONTENT AREAS (3)** Teaching reading study skills leading to reading efficiency and problem solving associated with specific subject matter content. Prerequisite: 27.360.

**27.463 (27.007) DEVELOPMENTAL READING FOR THE EARLY ADOLESCENT (3)** Methods of designing and teaching developmental reading programs for the middle school or junior high school student. Attention to the following: providing for individual differences, teaching students to read critically, developing and extending reading interests. Prerequisite: PSYC 70.201 or 70.321 or equivalent.

**27.494 TRAVEL AND STUDY IN SECONDARY EDUCATION (1-6)** Study abroad of educational facilities, programs or practices, or selected projects in education topics. By special arrangement with graduate program coordinator.

**27.495 INDEPENDENT STUDY IN EDUCATION: SECONDARY (1-4)** An opportunity for especially qualified students to undertake research problems or study projects relevant to their interest and training, under the direction of a staff member. Graduate credit by consent of Graduate Program Coordinator. Prerequisite: Consent of Chairperson of Secondary Education.

**27.496 DIRECTED READINGS IN SECONDARY EDUCATION (1-4)** Independent reading in selected areas of Secondary Education in order to provide for the individual a comprehensive coverage or to meet special needs. By invitation of the Department. Obtain consent of chairperson of Secondary Education. Graduate credit by consent of Graduate Program Coordinator only.

### *Graduate Division*

**27.641 (26.565) CURRICULUM DEVELOPMENT IN THE SECONDARY SCHOOL (3)** Principles and philosophies of curriculum development, objectives, practices and evaluation trends; the teacher's role. Prerequisite: Consent of instructor.

**27.643 (26.515) THE ADMINISTRATION OF THE SECONDARY SCHOOL (3)** Analysis of principles of school administration, the administrator's roles and responsibilities, human relations and personnel management, public relations, management of the school unit and curriculum. Prerequisite: Three years teaching experience, teacher certification and nine hours of graduate credit

**27.647 THE TEACHING PROCESS: SECONDARY EDUCATION (3)** Study of recent theories, methods, and findings in research on the teaching process. Analysis of teaching behaviors and exploration of teaching strategies in educational programs for Secondary students. Prerequisites: Teaching experience, either PSYC 70 511 or 29 501, and consent of Secondary Education Graduate Coordinator

**27.679 SEMINAR IN SECONDARY SCHOOL SOCIAL STUDIES (3)** A seminar approach to current research, trends, practices, issues, content, materials, and problems in the teaching of contemporary secondary school social studies. Individual reading and research will be pursued on selected topics culminating in a seminar paper. Prerequisite: Consent of instructor, or prior teaching experience in social studies.

**27.681 (26.577) SEMINAR IN SECONDARY EDUCATION (3)** Scholarly investigation of selected aspects of secondary education with emphasis on classroom application. A paper involving description and evaluation of the investigation will be required. Prerequisite: Twenty-four hours of graduate work including 29 691.

**27.683 (26.582) SEMINAR IN SECONDARY SUPERVISION (3)** Role of the supervisor, supervisory practices and techniques. Students may concentrate in areas related to their professional interests. Prerequisite: Nine hours of graduate work in the field of education.

#### **27.699 MASTER'S THESIS IN SECONDARY EDUCATION**

#### **ADULT EDUCATION COURSES (EDFS)**

##### *Upper Division — Undergraduate and Graduate*

**27.485 ADULT EDUCATION (3)** Introduction to the historical and philosophical evolution of adult education in the United States in relationship to current aims, types of programs, and issues. Prerequisite: Consent of instructor.

**27.487 TEACHING THE ADULT LEARNER (3)** Teaching-learning activities at various levels of adult education. The needs, motivation, and abilities of the adult learner are stressed. Prerequisite: Consent of instructor.

**27.489 PRINCIPLES OF READING INSTRUCTION FOR ADULTS (3)** Causes of adult reading disabilities, evaluation relevant to reading disabilities, and the methods and materials employed in the remediation process. Prerequisite: Consent of instructor.

## Special Certification Programs

#### **SAFETY AND DRIVER EDUCATION COURSES (EDPM)**

*Safety and Driver Education Courses carry graduate credit but may not be applied toward a Master's degree.*

##### *Upper Division — Undergraduate and Graduate*

**28.430 (26.471) PRINCIPLES OF ACCIDENT PREVENTION (3)** Includes a survey of the history and philosophy of the safety education movement, need for safety education, aims and objectives, accident causation and prevention, and the role of education in eliminating environmental hazards and reducing avoidable human error.

**28.431 (26.472) HIGHWAY TRANSPORTATION SYSTEM AND DRIVER TASK ANALYSIS (3)** History and philosophy of automobile and highway safety engineering. U.S. and International traffic controls, traffic laws and regulations, critical analysis of traffic accidents and causation, and attitude factors (May be taken concurrently with 28.432.)

**28.432 (26.473) METHODS OF TEACHING IN DRIVER EDUCATION AND SAFETY (3)** Specialized techniques for safety and driving instruction, including A-V aids, psycho-physical testing and evaluation, programmed instruction, multiple-car facility, on-street instruction, detonator demonstration and applications (May be taken concurrently with 28.431.)

**28.433 (26.484) MULTIPLE CAR FACILITIES AND ON-STREET INSTRUCTION IN DRIVER EDUCATION (3)** Supervised student teaching in Driver Education, including classroom and in-car, and utilization and planning for multiple-car facility (May be taken concurrently with 28.434) Prerequisite: 28.431 and 28.432, Maryland license and 3 years driving experience with good record

**28.434 (26.494) FIXED BASE SIMULATION AND ON-STREET INSTRUCTION IN DRIVER EDUCATION (3)** Supervised student teaching using driving simulators. Theory, mechanics, techniques, utilization and evaluation of driving simulators (May be taken concurrently with 28.433) Prerequisite: 28.431 and 28.432, Maryland license and 3 years driving experience with good record

**28.435 PROGRAMMED INSTRUCTION FOR DRIVER EDUCATION (3)** Philosophies and principles of programmed instruction. Analysis and evaluation of commercial programs and teacher-made programs, current research trends. Programming project is required with direct application through instructional utilization. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director.

**28.436 MULTI-MEDIA TECHNIQUES FOR DRIVER EDUCATION (3)** A laboratory approach to the utilization and planning of multi-media instruction. Principles and theory of multi-media communications, survey of literature and current trends. A project is required in the design, production and field testing of an instructional package. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director.

**28.437 AUTO MECHANICS FOR DRIVING INSTRUCTORS (2)** Acquaints students with mechanics of automobile to enable him to better teach this area and "trouble-shoot" in minor mechanical emergencies. Laboratory approach utilized. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director.

**28.438 (26.475) CONCEPTUAL MODELS IN ACCIDENT CAUSATION (3)** Treatment of the driver-behavior problem in its relation to many of the psychophysical factors and forces in the traffic environment that impinge upon the man behind the wheel. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director.

**28.439 (26.478) BASIC PUPIL TRANSPORTATION (3)** Consideration of organization and administration of state, county, and district pupil transportation service with emphasis on safety and economy. Selection and training of drivers, route planning, maintenance mechanics, bus specifications and procurement are included. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director

**28.440 (26.484) ADVANCED PUPIL TRANSPORTATION (3)** Consideration of the problems of school bus transportation, solutions employed, and a review of research and techniques in this field. Workshop approach utilized. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director.

**28.441 (26.474) ADMINISTRATION AND SUPERVISION OF SAFETY EDUCATION (3)** Background and experience in administration and supervision of Safety Education programs, K-12. Methods, techniques, materials, program planning, records and reports, financing and insurance. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director

*Special Certification Programs/67*

**28.442 (436) ADMINISTRATION AND SUPERVISION OF DRIVER EDUCATION (3)** Background and experience in administration and supervision of Driver Education programs. Methods of organization, techniques, materials, program planning, records and reports, financing and insurance, procurement, personnel selection, planning classroom and in-car laboratory experiences are included. Prerequisite: 15 credit hours in approved Safety and Driver Education courses and/or approval of Director

**28.443 (26.476) PROBLEMS IN SAFETY AND DRIVER EDUCATION (3)** Consideration of the individual problems encountered in the teaching of driver and safety education. The psychology of teaching and learning are emphasized and consideration is given to the implications of emotional and attitudinal factors in driver and traffic education. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director

**28.444 (26.477) FIELD STUDIES IN SAFETY AND DRIVER EDUCATION (1-4)** Designed to meet the needs of persons in the field with respect to research projects in special areas. Includes examination of existing courses of study, current trends, current research, evaluation, supervision, and technique. Students will be expected to carry out a special field project in their area of interest. "May be taken more than once, but not to accumulate more than 4 credits." Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director

**28.445 CURRICULUM DEVELOPMENT IN SAFETY AND DRIVER EDUCATION I (3)** History of curriculum development in safety and driver education, principles, philosophies, objectives; current practices, evaluation techniques, laboratory experience; and field study. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director.

**28.446 CURRICULUM DEVELOPMENT IN SAFETY AND DRIVER EDUCATION II (3)** History of curriculum development in safety and driver education, principles, philosophies, objectives; current practices, evaluation techniques, laboratory experience, and field study. Prerequisite: 15 credits in approved Safety and Driver Education courses and/or approval of Director

## **LIBRARY MEDIA EDUCATION (EDPM)**

### ***Upper Division — Undergraduate and Graduate***

Students who have a bachelor's degree and wish to prepare for an advanced certificate in school librarianship (Education Media Generalist, Level II) should consult the Secondary Education Coordinator in the Graduate Office for information regarding the program now being developed

**28.451 (26.355, 28.355) REFERENCE MATERIALS FOR SCHOOL LIBRARIANS (3)** A study of fundamental reference sources, bibliographic methods and searching techniques, the philosophy and administrative aspects of reference work. Practice in the use of reference sources, analysis of reference questions and the preparation of a subject bibliography. Not open to those who have taken 28.355

**28.453 (26.357) PRINCIPLES OF CATALOGING FOR SCHOOL MEDIA CENTERS (3)** Cataloging, subject analysis, classification and bibliographic control. The use of commercial processing services and central processing in the school systems. The development of the picture file, the vertical file, and a unified catalog that reflect both print and non-print materials for the media center. Not open to those who have taken 28.357

**28.459 (26.459) ADMINISTRATION AND SERVICES OF MEDIA CENTERS FOR SCHOOL LIBRARIANS. (3)** The organization of the school library for effective service to community, faculty, and students, emphasis on the library as a media center and the changing role of the librarian in today's education. The preparation of a handbook, a projected budget, library plans, and general business procedures. Field trips to school libraries and media centers

## **SPECIAL EDUCATION COURSES**

**28.481 METHODS AND MATERIALS FOR TEACHING THE VISUALLY IMPAIRED (3)** A course designed to examine recognized methods, materials, and programs for teaching children who are visually impaired. Included is the opportunity for students to select appropriate content and projects to meet unique interests and needs. Prerequisites: 70.101, 70.201 and 28.483 or consent of instructor

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**28.483 BRAILLE READING AND WRITING (3)** Course deals with reading and writing of braille. Additional individual project required of students taking course for Graduate credit. Prerequisite: PSYC 70 101 and 70 201, and consent of instructor.

## *ADDITIONAL EDUCATION COURSES (EDPM)*

### *Upper Division — Undergraduate and Graduate*

**29.401 (27.401) FOUNDATIONS OF EDUCATION (2-3)** Sociological, philosophical, psychological and historical foundations of Western education. Perspectives in these areas as they relate to current educational issues and practices. Three semester hours credit upon consent of department chairman. Prerequisite: Student teaching and consent of Chairperson, Department of Secondary Education.

**29.402 (29.302,27.301) HISTORY OF EDUCATION (3)** Major developments, personalities, and movements in the evolution of education.

**29.403 (27.403) COMPARATIVE EDUCATION (3)** A study of patterns of education in different cultural settings with implications for the student of American education. Emphasis on cross-cultural, political, economic and social aspects of education. Prerequisite: 29 401 or equivalent.

**29.405 (27.405) PHILOSOPHY OF EDUCATION (3)** Philosophic dimensions of the teaching learning process, as discriminated and discussed by major philosophers and educational philosophers.

**29.406 (28.405) RECENT TRENDS IN TEACHING (3)** Emerging concepts of teaching and organization for instruction. Prerequisite: Consent of instructor.

**29.407 (27.407) CONTEMPORARY ISSUES IN EDUCATION (3)** Seminar approach to current issues in education. Prerequisite: Consent of instructor.

**29.409 (28.409) FIELD STUDIES OF THE CHILD AND HIS COMMUNITY (2)** Planning and working with groups of children in approved social agencies or making extensive studies of recreational and non-recreational social agencies. Class discussions and field trips.

**29.411 OPEN-SPACE SCHOOLS: PHILOSOPHY AND PRACTICE (3)** Philosophy and operation of open-space schools, planning, management and evaluation. Emphasis on cognitive development. Prerequisite: Teaching experience.

**29.412 OPEN EDUCATION: INTERPERSONAL RELATIONS (3)** Interaction in team teaching. Human relations skill development for adults and children. Emphasis on affective domain. Prerequisite: Teaching experience and 29 411 Open Space Schools: Philosophy and Practice.

**29.414 (28.403) EDUCATIONAL TESTS AND MEASUREMENTS (3)** Problems in measurement, principles underlying choice of test instruments, survey of test literature; dealing with test data; constellation and interpretation of tests. Not open to those who have had 29 315 (28 315).

**29.415 (28.415) EDUCATIONAL STATISTICS (3)** Designed as a practical course in statistics for the student in education. Emphasis is upon educational applications of descriptive statistics, including central tendency, variability, and association. Prerequisite: 50 204, 50.205, or equivalent.

**29.417 (26.417) CHILDREN'S LITERATURE (3)** Study of the world of literature for children through wide independent reading as well as examination of non-print materials. Criteria and aids for selection. Attention to authors, illustrators, awards and citations. The importance of literature in the curriculum and in the lives of children.

**29.418 (26.418) YOUNG ADULT LITERATURE (3)** Examination of literature as an expression of basic needs and ideas of youth through wide independent reading. Studying criteria and aids for selection of books and other media. Evaluating in terms of forces affecting society and the adolescent.

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**29.425 (26.425) CORRECTIVE READING (2-6)** The psychology of reading; methods, principles, techniques, and materials for the classroom teacher in meeting atypical learning patterns. Experience in a practicum situation involving the development of skill in analysis and correction of reading disabilities. Prerequisites: Educ. 26.497 and 26.429 or 26.427, or consent of instructor, (to provide for students who have had different backgrounds and/or experience in the field.)

**29.431 THE SCHOOL CURRICULUM (3)** An examination of curriculum patterns and practices: includes sociological, philosophical and psychological factors which shape the curriculum. Prerequisite: Student teaching or professional experience in education.

**29.433 THE NON-GRADED CURRICULUM (3)** Study and analysis of the non-graded approach to curriculum organization focus on rationale, principles and models of continuous-progress curricular programs in elementary and secondary schools. Prerequisite: Student teaching and/or professional experience in education.

**29.445 HUMAN RELATIONS INSTITUTE ON INTERGROUP EDUCATION I: THE INDIVIDUAL (3)** Consideration given to: understanding one's self, the nature of prejudice and environmental factors which influence minority groups and cultures, and relationship of these factors to the development of meaningful educational programs. Prerequisite: Teaching experience or certification.

**29.446 HUMAN RELATIONS INSTITUTE ON INTERGROUP EDUCATION II: THE COMMUNITY (3)** Consideration of political, economic, social and educational factors as they affect minority cultures and implications for school and college programs. Prerequisite: Teaching experience or certification

**29.449 (26.003) CITIZENSHIP EDUCATION IN THE SCHOOL (3)** The development and implementation of activities for citizenship education in the school: philosophy, concepts, principles, techniques and resources for teacher and administrator. Prerequisite: 29.401, Foundations of Education and 78.375, Teaching Social Studies in the Elementary School, or equivalents, consent of instructor, teaching experience.

**29.451 (28.401) GUIDANCE IN THE PUBLIC SCHOOL (2-3)** Scope and function of a guidance program; the role of the classroom teacher in guidance.

**29.461 (28.461) LANGUAGE AND THE URBAN CHILD (3)** Language theory in reference to psychological, sociological, and cultural effects in the classroom will be studied. Special emphasis will be given to the analysis of dialects and "standard" and "non-standard" speech patterns as well as practical classroom applications. Prerequisite: Teaching or student teaching experience or consent of instructor.

**29.467 (28.467) TEAM TEACHING WORKSHOP (3)** Conducted to assist teachers who are actively engaged in team teaching or will be participating as members of a team in the future.

**29.471 (28.001) SUPERVISORY PRACTICES IN TEACHER EDUCATION (3)** Experiences and study in developing particular skills and competencies for supervising quality laboratory/field experiences. Content is designed for supervising teachers, team leaders, and resource personnel. Prerequisite: Teaching experience. Graduates count this as a workshop elective.

**29.475 (29.006) INTRODUCTION TO CAREER DEVELOPMENT EDUCATION: THEORY AND PRACTICE (3)** Recent trends in career development school programs K-12, examining presently operating career programs; evaluating existing career materials; assessing attitudes toward work and the elements of career choice.

**29.494 TRAVEL AND STUDY EDUCATION: (PROJECT TO BE NAMED) (3)** Study abroad of educational facilities, programs of practices, or selected projects in educational topics. By special arrangement with program chairman and sponsoring instructors. Prerequisite: By consent of graduate program coordinator.

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**29.495 INDEPENDENT STUDY IN EDUCATION (1-4)** An opportunity for especially qualified students to undertake research problems or study projects relevant to their interest and training under the direction of a staff member. Prerequisite: Approval of appropriate program chairman. Graduate credit by consent of graduate program coordinator only.

**29.496 DIRECTED READINGS IN EDUCATION (1-4)** Independent readings in selected areas of education, in order to provide for the individual, a comprehensive coverage or to meet special needs. By invitation of the Department to major students. Graduate credit by consent of graduate program coordinator only.

**76.488 (26.488) AEROSPACE EDUCATION WORKSHOP (3)** In cooperation with CAP, USAF and NASA. A fund of general knowledge about aviation and space exploration. Teaching materials, resources, and field experiences. Usually a weekend at Florida's Cape Kennedy Space Center and other day long tours TBA. For K-12 teachers, supervisors, administrators and students of teaching. LAB FEE \$15.00 which includes travel charges. 3 weeks. Summers only.

### *Graduate Division*

**29.501 (27.501) EDUCATIONAL IDEAS IN HISTORICAL PERSPECTIVE (3)** Current trends and issues in education as reflecting and influencing the social, economic, and political forces in our cultural heritage. Prerequisite: 29.401 or 29.402 or 29.405.

**29.507 (26.507) HOME, SCHOOL, COMMUNITY (3)** The interaction between home and school and community in educational programs; survey and evaluation of techniques for working with parents; study of various agencies contributing to the education and well-being of children and youth at home and at school. Prerequisite: a course in Sociology and approval of Department of Education.

**29.511 (28.511) SUPERVISION OF STUDENT TEACHING (3)** An analysis of the roles of the cooperating teacher, college supervisor, and student teacher, current practices, issues, problems, trends and evaluation in laboratory experiences, current research. Prerequisite: Teaching experience.

**29.517 (28.517) SCHOOL LAW (3)** A study of the legal framework within which the public and non-public schools function. The course will give attention to the legal relationships among federal, state, and local governments, the legal status of school districts, boards of education, and school administrators, the legal status of non-public schools; and the law regarding all facets of the school program, staff, and pupils. Prerequisite: 29.501, Educational Ideas in Historical Perspective.

**29.549 AMERICAN POLITICS AND EDUCATION (3)** The American political structure and its relation to policy making and administration of public education. Topics include: educational opportunity, community responsibility and control, accountability, role of the courts, church-state relations, academic freedom. Prerequisite: 29.401 Foundations of Education, and 68.103, Introduction to American National Government, or equivalent.

**29.550 ANALYSIS AND MODIFICATION OF TEACHING BEHAVIOR (3)** The analysis of teaching learning situations to aid the advanced teacher education students to develop, refine and prescribe skills and strategies and field work. Prerequisite: Teaching experience; supervisory experience, 29.471, Supervisory Practices in Teacher Education; and/or 29.511, Supervision of Student Teaching.

**29.585 (28.495) INTERDISCIPLINARY SEMINAR IN PHILOSOPHY AND EDUCATION (3)** An interdisciplinary seminar with two aspects. (1) Current thought in the philosophy of a variety of academic fields. (2) Their implications for the broad field of education. Concentration will be upon development in the present century.

**29.595 INDIVIDUALIZED STUDY (3-6)** Individually planned programs which will permit the student to engage in research and/or field experiences relative to his professional growth. Prerequisite: Admission by application to the Graduate Program Coordinator only.

**29.601 (28.601) REPRESENTATIVE AMERICAN EDUCATORS (3)** A biographical approach to the development of American Education through selected groups of American educators whose contributions have significantly shaped its form and substance from the colonial period to the present. Prerequisite: 29 401, Foundations of Education or equivalent

**29.607 SEMINAR IN EDUCATIONAL CLASSICS I: ANCIENT PERIOD THROUGH THE RENAISSANCE (3)** An indepth study of the classical works of selected authors. Concentration on liberalizing and humanistic influences. A seminar paper will be developed by each student. Prerequisite: 29 401 Foundations of Education or 29.301 History of Education, or 29.501 Educational Ideas in Historical Perspective.

**29.609 SEMINAR IN EDUCATIONAL CLASSICS II: RENAISSANCE TO THE PRESENT (3)** An indepth study of the classical works of selected authors. Concentration on liberalizing and humanistic influences. Prerequisite: 29 401 Foundations of Education or 29 301 History of Education, or 29 501 Educational Ideas in Historical Perspective

**29.621 (26.621) READING DISABILITIES (3)** The content of this course includes the following: causes of reading disabilities; observation and interview procedures; standard and informal tests, report writing, diagnosis and correction of reading difficulties. Prerequisite: One undergraduate course in the teaching of reading

**29.623 (26.623) METHODS AND MATERIALS IN TEACHING READING IN THE ELEMENTARY SCHOOL (3)** Covers trends in methods, materials, and individualized reading designs essential to the organization and administration of a functional reading program. Prerequisite: One undergraduate course in the teaching of reading

**29.625 (26.625) CLINIC PRACTICUM IN READING (3)** A clinical or laboratory experience. Students diagnose and treat reading disability cases under the supervision of the directors of the reading program. Prerequisite: 29 621 and 29 623

**29.627 (26.627) EVALUATION OF READING RESEARCH (3)** The student will be exposed to the tools of research and experimentation. The emphasis will be on past and present research relevant to reading. Prerequisite: A course in Tests and Measurements or Statistics and consent of instructor.

**29.629 (26.629) SEMINAR IN READING (3)** An advanced course to familiarize the student with interdisciplinary aspects of the reading process. The highlight of the course will be the team teaching aspect. Consultants such as psychologists, pediatricians, optometrists, guidance teachers, etc., will play an important role in this course. Prerequisite: 29 621 and 29 623

**29.631 DIAGNOSIS AND EVALUATION OF READING DISABILITIES (3)** Emphasis on the practical uses of standardized and non-standardized instruments and procedures for evaluating reading disabilities. Prerequisites: 29 621

**29.691 (28.691) INTRODUCTION TO RESEARCH IN EDUCATION (3)** Research as a method of solving problems. Contributions of research to education. Prerequisite: Undergraduate course in Tests and Measurements, or Elementary Statistics, or consent of instructor

**29.699 (28.699) MASTER OF EDUCATION THESIS (3)** Carefully executed investigation and accurate recording of a specific problem selected with reference to the student's professional goals and resources.

Historical, descriptive, experimental, or action research can provide a single or multiple framework within which the student may work. Includes an outline of the proposed thesis submitted for inspection and approval by the Graduate Studies Committee, an application of techniques derived from the research course, and guidance of Research Adviser.

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# English

Co-Chairperson — Donald H. Craver

Co-Chairperson — Dan L. Jones

## *ENGLISH COURSES (ENGL)*

### *Upper Division — Undergraduate and Graduate*

**30.301 TOPICS IN WORLD LITERATURE (2 or 3)** Consideration of special figures, periods, genres or conventions. Variation in content from year to year, may be re-elected. Prerequisite: Three English courses

**30.302 THE ENGLISH RENAISSANCE (3)** Non-dramatic literature of the Elizabethan period. Prerequisite: Three English Courses

**30.303 SEVENTEENTH CENTURY ENGLISH PROSE AND POETRY (3)** Major English non-dramatic literature of the seventeenth century, the approach will be both critical and historical. Prerequisite: Three English Courses

**30.305 TOPICS IN ENGLISH LITERATURE (2 or 3)** Consideration of special figures, periods, genres, or conventions. Variation in content from year to year, may be re-elected. Prerequisite: Three English courses

**30.309 AMERICAN DRAMA (3)** A study of American drama from the beginning to the present. Prerequisite: Three English courses

**30.311 TOPICS IN AMERICAN LITERATURE (2 or 3)** Consideration of special figures, periods, genres, or conventions. Variation in content from year to year, may be re-elected. Prerequisite: Three English courses

**30.312 WORLD DRAMA I (3)** An historical and critical study of world drama and the cultural forces which produced it from the ancient Greeks to the Neo-Classical period. Prerequisite: Three English courses

**30.313 WORLD DRAMA II (3)** An historical and critical study of world drama and the cultural forces which produced it from the Neo-Classical period to the late nineteenth century. Prerequisite: Three English courses

**30.319 ENGLISH MEDIEVAL AND RENAISSANCE DRAMA (3)** Development of the English Drama from the Middle Ages through the Renaissance, excluding Shakespeare. Prerequisite: Three English courses

**30.320 ENGLISH DRAMA FROM THE RESTORATION TO SHAW (3)** Development of the English Drama in the seventeenth, eighteenth, and nineteenth centuries. Prerequisite: Three English courses

**30.321 MODERN DRAMA (3)** Critical reading of plays of the late nineteenth century and the twentieth century. Prerequisite: Three English courses

**30.323 THE CONTINENTAL NOVEL (3)** A study of major continental novels in translation. Emphasis will be upon related and comparative elements in the novels of writers of France, Germany, Italy and other European countries. Prerequisite: Three English courses

**30.325 HISTORICAL LINGUISTICS (3)** An introduction to language typology and Indo-European philology, historical development of linguistics up to the twentieth century. Prerequisite: Three English courses

**30.326 MYTH AND LITERATURE (3)** The reinterpretation of themes and figures from Greek and Roman mythology. Prerequisite: Three English courses

**30.327 STRUCTURAL LINGUISTICS (3)** A study of the developments in linguistic theory in the twentieth century; major figures, DeSaussure, Sapir, Bloomfield, Trubetzkoy, Chomsky. Prerequisite: Three English courses

**30.329 HISTORY OF AMERICAN ENGLISH (3)** Origins and history of American dialects; development of elements of vocabulary, sounds, and grammar which distinguish American English; standards of American English. Prerequisite: Three English courses

**30.335 LITERATURE OF THE ENGLISH ROMANTIC PERIOD (3)** Major writers, social and political background, important literary ideas, and criticism. Prerequisite: Three English courses.

**30.337 VICTORIAN PROSE AND POETRY I (3)** A study of the works of Tennyson, Arnold, and the Victorian "prophets" — Macaulay, Carlyle, Newman, and Mill. Prerequisite: Three English Courses

**30.338 VICTORIAN PROSE AND POETRY II (3)** A study of the works of Browning, Ruskin and the Pre-Raphaelites, Pater, Hardy, Housman, and Yeats. Prerequisite: Three English Courses

**30.340 MEDIEVAL LITERATURE (3)** English literature during the Middle Ages, with emphasis on the mystical writers, Piers Plowman, The Gawain-poet, and Arthurian literature. Prerequisite: Three English courses

**30.345 EIGHTEENTH CENTURY ENGLISH PROSE AND POETRY (3)** A study of backgrounds, literary trends, and significant authors, with emphasis on Swift, Pope, Johnson and Boswell. Prerequisite: Three English courses

**30.361 TOPICS IN WOMEN'S STUDIES (3)** Consideration of selected literature by or about women. Variation in content from year to year may be re-elected. Prerequisite: Three English courses, or consent of instructor

**30.401 THE LITERATURE OF BLACK AMERICA (3)** The literature of black expression in the United States with emphasis on the twentieth century. Non-fiction, fiction, and poetry by black writers will be studied. Prerequisites: Three English courses or consent of instructor.

**30.405 LITERARY CRITICISM I (3)** History and principles of literary criticism. Prerequisite: Three English courses and consent of instructor

**30.407 (40.319) MODERN POETRY (3)** Work of the important twentieth century poets. Prerequisite: Three English courses

**30.408 MODERN FICTION TO WORLD WAR II (3)** Work of the modern masters of fiction with emphasis on Proust, Mann and Joyce. Prerequisite: Three English courses

**30.409 MODERN FICTION SINCE WORLD WAR II (3)** Works of the significant writers — English, American, and Continental — of the past thirty years, including such figures as Grass, Robbe-Grillet, Solzhenitsyn, and Burgess tradition established by the modern masters of fiction. Prerequisite: Three English courses

**30.410 CHAUCER (3)** A study of the major poetry. Prerequisite: Three English courses

**30.412 MILTON (3)** A study of the poetry and major prose works. Prerequisite: Three English courses

**30.415 SHAKESPEARE (COMEDIES) (3)** Shakespeare's development as a poet and a dramatist during the period of the comedies and historical plays. Prerequisite: Three English courses.

**30.416 SHAKESPEARE (TRAGEDIES) (3)** The great tragedies and the late romantic comedies of Shakespeare. Prerequisite: Three English courses.

**30.419 THE TWENTIETH CENTURY BRITISH NOVEL (3)** Survey of the British novel from Conrad to the present. Prerequisite: Three English courses

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**30.420 TWENTIETH CENTURY BRITISH POETRY (3)** Survey of British poetry from Hopkins to the present. Prerequisite: Three English courses

**30.422 DEVELOPMENT OF THE ENGLISH NOVEL I (3)** History and development of the English novel through the eighteenth century. Prerequisite: Three English courses

**30.423 DEVELOPMENT OF THE ENGLISH NOVEL II (3)** History and development of the English novel through the nineteenth century. Prerequisite: Three English courses

**30.427 LITERATURE OF THE AMERICAN ROMANTIC PERIOD (3)** Major writers, social and political background, important literary ideas, and criticism. Prerequisite: Three English courses

**30.430 HISTORY OF THE ENGLISH LANGUAGE (3)** Changes and reasons for the changes in grammar, sound, and vocabulary of the language, from Old English to modern times. Prerequisite: Three English courses

**30.431 STRUCTURE OF THE ENGLISH LANGUAGE (3)** A linguistic approach to sounds, forms, syntax, and usage. Prerequisite: Three English courses.

**30.435 AMERICAN SHORT STORY (3)** A study of the American short story from the beginning to the present. Prerequisite: Three English courses

**30.437 (30.349) SURVEY OF ENGLISH PROSE (3)** Survey of non-fictional prose in English literature from 1500 to present. Prerequisite: Three English courses

**30.445 NINETEENTH CENTURY AMERICAN NOVEL (3)** A study of major American novelists of the nineteenth century with emphasis on Cooper, Melville, Hawthorne, Howells, James, Crane, and Norris. Prerequisite: Three English courses

**30.446 TWENTIETH CENTURY AMERICAN NOVEL (3)** A study of major American novelists of the twentieth century with emphasis on James, Fitzgerald, Hemingway, Faulkner, Malamud, Bellow, Barth, and Nabokov. Prerequisite: Three English courses.

**30.447 AMERICAN POETRY TO 1900 (3)** A study of American poetry from its beginning through Robert Frost. Emphasis on major figures. Prerequisite: Three English courses.

**30.448 TWENTIETH CENTURY AMERICAN POETRY (3)** A study of major American poets from T. S. Eliot to the present. Prerequisite: Three English courses.

**30.485 (440) SEMINAR IN ENGLISH STUDIES I (3)** Thorough study of one major area of English, American, or World Literature (author, period, movement, etc.) not available through other electives. Areas covered will vary from semester to semester. Emphasis on research and scholarly writing with extensive research paper required. May be taken one or two semesters. Prerequisite: Consent of instructor.

**30.486 (441) SEMINAR IN ENGLISH STUDIES II (3)** Thorough study of one major area of English, American, or World Literature (author, period, movement, etc.) not available through other electives. Areas covered will vary from semester to semester. May be taken one or two semesters. Prerequisite: Consent of instructor

**30.491 (480) DIRECTED READING IN ENGLISH (2-4)** Independent reading in literature or in related disciplines dealing with specific periods, topics, problems or comparative developments of literature. Topic selected by student in consultation with the instructor. Prerequisites: Eighteen hours in English, or twelve hours in English, and six hours in a related discipline; a minimum average of 3.0 in English and the related discipline; requires consent of the department chairperson and instructor. May be repeated for credit.

**30.494 TRAVEL AND STUDY (3-6)** Countries and topics to be selected by the Departments and instructors sponsoring the program. For enrollment procedures, write the Chairman of the Department early in the fall of the academic year preceding the summer of the intended study

### *Graduate Division*

**30.521 STUDIES IN ENGLISH LITERATURE (3)** Thorough study of one major area of English Literature (author, period, movement, etc.) Areas covered will vary from semester to semester. Substantial research required. Prerequisite: Graduate standing and consent of instructor.

**30.523 STUDIES IN LITERARY CRITICISM (3)** Thorough study of one major area of Literary Criticism (author, period, movement, etc.) Areas covered will vary from semester to semester. Substantial research required. Prerequisite: Graduate standing and consent of instructor.

**30.525 STUDIES IN AMERICAN LITERATURE (3)** Thorough study of one major area of American Literature (author, period, movement, etc.) Areas covered will vary from semester to semester. Substantial research required. Prerequisite: Graduate standing and consent of instructor.

**30.527 STUDIES IN WORLD LITERATURE (3)** Thorough study of one major area of World Literature (author, period, movement, etc.) Areas covered will vary from semester to semester. Substantial research required. Prerequisite: Graduate standing and consent of instructor.

**30.531 STUDIES IN LINGUISTICS (3)** Topics in the technology and philosophy of language, descriptive grammar, psycholinguistics, sociolinguistics, etc. Topic to vary. May be repeated as topics change. Prerequisite: Graduate standing and consent of instructor.

## General Studies

### *GENERAL STUDIES COURSES (GEST)*

#### *Graduate Division*

**33.501 INTRODUCTORY SEMINAR IN GENERAL STUDIES (3)** For graduate students in the Master of Arts in General Studies degree program. A seminar course in which disciplines are examined from philosophical, methodological, utilitarian and other viewpoints. Each participant prepares for this purpose an analysis and description of his/her undergraduate major discipline or area of concentration. Prerequisites: None.

## Geography and Environmental Planning

Chairperson: Norman R. Diffenderfer

Graduate Studies Coordinator; Geography Program: Norman R. Diffenderfer

### *GEOGRAPHY COURSES (GEOG)*

#### *Upper Division — Undergraduate and Graduate*

#### *SYSTEMATIC COURSES*

**34.319 SOILS AND VEGETATION (3)** A resource study of the world's soil and plant formations with emphasis placed upon their genesis and spatial differentiations. Prerequisite: 34 101-102 or consent of instructor.

**34.351 URBAN DESIGN — MAN-SPACE-ENVIRONMENT (3)** The physical planning process at the immediate, perceptual level. The relation of environment and behavior is explored, different urban areas are analyzed and a short design problem will be assigned. Prerequisite: 34 101-102 or consent of the instructor.

**34.361 ADVANCED ECONOMIC GEOGRAPHY (3)** Studies mainly of the secondary and tertiary industries with some emphasis on quantitative analyses of selected economic activities. Prerequisite: 34.231

**34.371 (301) ADVANCED PHYSICAL GEOGRAPHY (3)** Detailed analysis of characteristics, distribution, and geographical significance of the earth's physical features. Prerequisite: 6 hours of geography or consent of instructor.

**34.373 (395) CLIMATOLOGY (3)** Character, causes, and distribution of climatic types. Emphasis upon world patterns. Students may be required to do field work. Prerequisite: 6 hours of geography or consent of instructor.

**34.375 QUANTITATIVE METHODS IN GEOGRAPHY (3)** Focus on statistical problems associated with the analysis of geographic data. Emphasis on the unique spatial problems of point pattern analysis, areal association, and regionalization. Prerequisite: MATH 50.111, 50.115 or 50.119.

**34.377 DESCRIPTIVE METEOROLOGY (4)** An introduction to the various meteorological elements. Emphasis is placed on the interaction of temperature, pressure, wind, and moisture in creating weather patterns. Three hours of lecture and two hours of laboratory. Field work may be required. Prerequisite: 6 hours of Natural Sciences or Geography or the equivalent.

**34.381 (331) POLITICAL GEOGRAPHY (3)** Effect of political groupings upon man's use of the world, and the influence of the geographic base upon political power. Prerequisite: 6 hours of geography or consent of instructor.

**34.385 GEOGRAPHY OF POPULATION AND SETTLEMENT (3)** Regional analysis of environmental resource factors contributing to various population densities and the resultant settlement patterns of man's use of the land. Prerequisite: 3 credits of geography in 100 or 200 level series or consent of instructor.

**34.391 (413) URBAN GEOGRAPHY (3)** Survey of the structure, functions, forms and development of urban units. Emphasis upon the locational features of social, economic, and cultural phenomena. Field work. Prerequisite: 6 hours of geography or consent of instructor.

**34.401 GROWTH OF GEOGRAPHIC THOUGHT (3)** History, nature, and methodology of geography as a discipline. Analysis of schools of geographic thought, critical evaluation of important geographic work. Prerequisite: 6 hours of geography or consent of instructor.

### **TECHNIQUE COURSES**

**34.321 (300) INTERPRETATION OF AERIAL PHOTOGRAPHS (3)** Reading and interpretation of aerial photographs. The application of the aerial photographs in the fields of geography, geology, and photogrammetry. Prerequisite: 6 hours of geography or consent of instructor.

**34.323 (330) CARTOGRAPHY AND GRAPHICS I (3)** Study in design, construction, and effective application of maps and charts for analysis and publication; practical exercises in the use of cartographic tools, materials, and techniques. Prerequisite: 6 hours of geography or consent of instructor.

**34.324 CARTOGRAPHY AND GRAPHICS II (3)** Advanced exercises in map graphics and areal distribution maps. New techniques in presentation of graphic data and spatial relationships. Prerequisite: 34.323.

**34.327 MAP ANALYSIS AND INTERPRETATION (3)** Principal types of maps and their uses. Emphasis on understanding map components and the range of physical and cultural phenomena indicated on maps. Includes selected exercises which illustrate the analytical and graphical values of maps. Prerequisite: 6 hours of geography or consent of instructor.

**34.341 TECHNIQUES AND MATERIALS FOR GEOGRAPHY TEACHERS (3)** A systematic review of geographic concepts in relation to interdisciplinary studies in the physical and social sciences. Examination of the content of geography and problems of presentation. Prerequisite: 6 hours of geography or consent of instructor.

## *REGIONAL COURSES*

**34.419 EASTERN ANGLO-AMERICA (3)** A description, an analysis, and an interpretation of the landscapes of Eastern United States and Southeastern Canada. A regional treatment of the natural and cultural settings with attention given to international relations. Prerequisite: 6 hours of Geography or consent

**34.420 WESTERN ANGLO-AMERICA (3)** A description, an analysis, and an interpretation of the landscapes of Western United States and Northern and Western Canada. A regional treatment of the natural and cultural settings with attention given to international relations. Prerequisites: 6 hours of Geography or consent.

**34.423 (320) HISTORY AND GEOGRAPHY OF MARYLAND (3)** Political, social and economic development of the state and its relation to major events in the development of the nation. Natural resources, regional land use, industrial development, particularly in the Baltimore area. Field trips. Field trip expenses about \$15.00, payable when trips are taken. Prerequisite: 6 hours of geography or consent of instructor

**34.431 (318) GEOGRAPHY OF AFRICA (3)** Material resources and human geography of Africa. Problems of economic development, nationality and cultural conflicts. Prerequisite: 6 hours of geography or consent of instructor

**34.441 (390) GEOGRAPHY OF AUSTRALIA AND OCEANIA (3)** Regional approach in analyzing and interpreting the physical and cultural patterns, natural resources, current problems, and strategic importance of the Pacific world. Prerequisite: 6 hours of geography or consent of instructor

**34.443 (315) GEOGRAPHY OF EAST ASIA (3)** Regional studies of the physical and cultural foundations in China, Japan, and Korea. Emphasis upon human and economic resources, and role in world affairs. Prerequisite: 6 hours of geography or consent of instructor

**34.445 (314) GEOGRAPHY OF SOUTH AND SOUTHEAST ASIA (3)** Regional studies of the physical and cultural foundations of India, Pakistan, Ceylon, Philippines, and Indonesia. Principal human and economic resources, problems of development, and role in world affairs. Prerequisite: 6 hours of geography or consent of department

**34.447 ECONOMIC AND POLITICAL GEOGRAPHY OF THE MIDDLE EAST (3)** A regional and systematic analysis of Southwest Asia and North Africa. Study of major and cultural resources and related patterns of spatial organization, economic and political development, and associated problems. Prerequisite: 34.101, 34.102, or consent of instructor

**34.451 (311) GEOGRAPHY OF EUROPE (3)** Regional analysis and appraisal of the human geography and natural resources of Europe. Problems of nationality, economic development, and cultural conflicts. Prerequisite: 6 hours of geography or consent of instructor.

**34.453 (319) GEOGRAPHY OF THE USSR (3)** Physical and cultural patterns and their bearing on the Soviet Union as a world power. Regional distribution and use of natural and human resources in agriculture and industry. Problems in economic development and production. Prerequisite: 6 hours of geography or consent of instructor

**34.461 (309) GEOGRAPHY OF SOUTH AMERICA (3)** Distribution and character of the economic activities in various South American countries in relation to physical and cultural features. Resources and problems of their development, importance of foreign trade to the economy; relationship with the United States. Prerequisite: 6 hours of geography and consent of instructor.

**34.463 GEOGRAPHY OF CENTRAL AMERICA AND THE CARIBBEAN (3)** Distribution and character of the economic activities in various Central American and Caribbean countries in relation to physical and cultural features. Resources and problems of their development, importance of foreign trade to the economy, relationship with the United States. Prerequisite: 6 hours of geography or consent of instructor

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## *SEMINARS AND SPECIAL COURSES*

**34.479 FIELD RESEARCH IN PLANNING (1-3)** Field research in contemporary planning problems. Research projects conducted under the supervision of the various state, local, and regional planning agencies. This course may be re-elected once for credit. Prerequisite: Consult the department chairperson.

**34.481 SEMINAR: SELECTED TOPICS IN GEOGRAPHY (3)** Reading and research in selected topics in the field of geography. Prerequisite: 6 hours of geography or consent of instructor.

**34.483 (487) SEMINAR: THE AMERICAS (3)** Individual study in selected problems of the geography of the Americas. Prerequisite: 6 hours of geography or consent of instructor.

**34.485 (488) SEMINAR: SOUTH ASIA (3)** Reading, research, and discussion on special topics related to India, Pakistan, Ceylon, the Himalayan Kingdoms, and Afghanistan. Prerequisite: 6 hours of geography or consent of instructor.

**34.487 (489) SEMINAR: GEOGRAPHY AND MAN IN THE TWENTIETH CENTURY (3)** Selected studies on the role of geographic factors in economic and political affairs and in the development of technology. Analysis of contributions of applied geography to the solution of urban and rural problems. Prerequisite: 6 hours of geography or consent of instructor.

**34.489 SEMINAR: STUDIES IN ENVIRONMENTAL QUALITY (3)** Studies of selected problems in the quality of man's physical and cultural environments. Readings, discussions and research on geographical and other aspects of man's use of natural resources and major forms of environmental pollution. Prerequisite: 34 101, 34 102, or consent of instructor.

**34.493 FIELD GEOGRAPHY (2-6)** Practical laboratory experience in techniques in the collection and analysis of data by observations, measurements, mapping and photographic records. Such techniques are to be applied to selected geographic problems. Prerequisite: 6 hours of geography or consent of instructor.

**34.494 TRAVEL AND STUDY (3-6)** Countries and topics to be selected by Departments and instructors sponsoring the program. For complete information, write the Chairperson of the Department early in the Fall of the academic year preceding the summer of intended study. Prerequisite: Upper division status and consent of instructor.

**34.495 DIRECTED READING IN GEOGRAPHY (3)** Independent reading in selected areas of geography. Open by invitation of the Geography Department to students taking a major or minor in geography. Prerequisite: 15 hours in geography and a minimum average of 3.0 in geography.

**34.496 INDEPENDENT STUDY IN GEOGRAPHY (1-6)** Independent research, study, or field experience under supervision of a member of the Geography faculty. Designed for advanced students who wish to conduct independent investigations on aspects of Geography which are of special interest or not covered in other courses. Registration arranged with department Chairperson. Prerequisite: Advanced undergraduate standing with at least 18 hours in geography or graduate standing.

### *Graduate Division*

**34.521 RESEARCH TECHNIQUES IN GEOGRAPHY (3)** A course designed to investigate the primary sources of information in geography and to learn the nature of original investigation. Prerequisite: 6 hours of geography or consent of instructor.

**34.571 STUDIES IN PHYSICAL GEOGRAPHY (3)** The study of selected geographical topics dealing with physical landscape phenomena, especially in regards to distribution, relationships, and significance to man. Topics will be announced. No more than six semester hours may be applied toward a degree. Prerequisite: 6 hours of geography or consent of instructor.

**34.581 SEMINAR IN POLITICAL GEOGRAPHY (2-6)** Special subjects dealing with the geography of international politics, e.g. boundary problems, global strategy, space, sovereignty. Topics to be announced. No more than six semester hours may be applied toward a degree. Prerequisite: Six hours of geography or consent of instructor.

**34.583 ENVIRONMENTAL PROBLEMS IN MARYLAND (3)** Individual research on a selected environmental problem in Maryland, oral and written presentations. Prerequisite: Graduate status and either geography major, previous work in Maryland, previous seminar or consent of instructor.

**34.591 URBAN GEOGRAPHY STUDIES (2-6)** Selected topics dealing with the application of geography to planning, retail and industrial location, and trade analysis. Topics to be announced. No more than six semester hours may be applied toward a degree. Prerequisite: 6 hours of geography or consent of instructor.

**34.601 LAND USE STUDIES (2-6)** Certain selected problems on urban, rural and rural-urban landscapes which consider and account for geographic differences in land utilization. Topics will be announced. No more than six semester hours may be applied toward a degree. Prerequisite: 6 hours of geography or consent of instructor.

**34.671 SEMINAR IN REGIONAL GEOGRAPHY (2-6)** The description, analysis and interpretation of natural and cultural phenomena in certain significant geographic regions. Seminar topics will be announced. No more than six semester hours may be applied toward a degree. Prerequisite: 6 hours in geography or consent of instructor.

**34.697 RESEARCH (2-6)** Directed investigation of a pertinent and appropriate geographical problem or problems based upon field and library study, which will contribute to geographical knowledge. Designed for the Master's thesis credit or individual research.

## Health Science

Chairperson: Clint Bruess

### *HEALTH COURSES (HEAL)*

#### *Upper Division — Undergraduate and Graduate*

**41.401 SEX EDUCATION AND FAMILY LIFE (3)** Designed for the present and future teacher, the course includes an overview of human sexuality. Emphasis will be placed on the needs for education about sexuality, theories of sexual education, selection of content, sequential unit planning, survey and availability of A-V materials and the qualifications of the effective sex educator. Prerequisite: 41 221 or 41 101, 70 201, 14 101, or consent of department.

**41.402 HEALTH SEMINAR (3)** Examination of recent trends in school and public health, reports of student projects, consultation with experts in health field. Prerequisite: Consent of department.

**41.403 (301) HEALTH EDUCATION CURRICULUM (3)** Development of school health programs based on health needs and problems of school children. Prerequisites: 41 101, 41 201.

**41.405 DRUGS IN OUR CULTURE (3)** An indepth review of harmless, harmful, useful, and useless substances which may affect behavior or mood, the interaction of psychological, sociological and physiological components included. Prerequisite: 41 101 or consent of department.

**41.451 ECOLOGICAL ASPECTS OF HEALTH (3)** An examination of the interrelationship between man and his environment. Emphasis is placed upon health aspects of pollution, housing, sanitation, radiation, behavioral disorders, and epidemiology. Prerequisite: 41 101, 80 101 or consent of department.

**41.485 HEALTH WORKSHOP (3)** For teachers, administrators, and individuals concerned about health related fields. Contemporary health aspects are considered with emphasis on implementation of positive behavior aimed at improving the health of the individual and the community. Enrollment limited to 25. Prerequisite: Consent of department.

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**41.497 HEALTH DIRECTED READING (1, 3)** Independent reading in health or related disciplines  
Prerequisite: A minimum of 10 credits in Health Science and consent of department chairperson

### *Graduate Division*

**41.501 PROBLEMS IN SCHOOL HEALTH (3)** Designed to assist the student in developing an understanding of the current problems in school health programs. The structure, organization, scope, content and practices in the field as revealed through literature and research is studied. Prerequisite: Consent of department

**41.511 CURRENT LITERATURE IN HEALTH (3)** Critical analysis of current and past research findings concerning health knowledge, attitudes, behavior, and educational techniques. A comprehensive review of health-related periodicals is included. Prerequisite: Consent of department

**41.513 ANALYSIS OF PHYSIOLOGICAL CONCEPTS (3)** Analysis of research and laboratory applications of the physiological factors that affect human efficiency before, during and after exercise. Factors to be investigated include: Metabolism, circulation, respiration, muscular physiology, endocrine system, ergogenic aids, environmental factors, etc. Prerequisite: Consent of department

**41.591 DIRECTED READINGS IN HEALTH (3)** Individual study of a significant problem in health through consultation with appropriate faculty members. Emphasis is on increased knowledge of health. Prerequisite: Consent of department

## History

Chairperson: Mary Catherine Kahl

### *HISTORY COURSES (HIST)*

#### *Upper Division — Undergraduate and Graduate*

**40.301 ANCIENT NEAR EASTERN CIVILIZATIONS (3)** The civilizations of Mesopotamia and Egypt and the peripheral developments in Syria-Palestine and Asia Minor. Prerequisite: 40 101 or consent of instructor

**40.302 CLASSICAL CIVILIZATIONS (3)** The civilizations of Greece and Republican Rome with emphasis on their comparative developments to 30 B.C. Prerequisite: 40 101 or consent of instructor

**40.303 HELLENISTIC CIVILIZATION (3)** The civilization that arose in the Mediterranean Basin after the conquests of Alexander and the Roman Empire within the context. Prerequisite: 40 101 or consent of instructor

**40.309 HISTORY OF EAST ASIA UNTIL THE SEVENTEENTH CENTURY (3)** The historical development of the civilizations of China, Japan, and Korea prior to the intrusion by the Western powers, with special emphasis on the evolution of the Confucian culture of China. Prerequisite: 40 110 or consent of instructor

**40.310 HISTORY OF EAST ASIA SINCE 1600 (3)** A study of the historical development of China, Japan, and Korea in the past three centuries focusing on their respective responses to the Western World. Prerequisites: 40 110, or 40.309 or consent of instructor

**40.311 (367) HISTORY OF INDIA TO 1750 (3)** A survey of the history and culture of the Indian subcontinent from prehistoric times to the beginning of the British Raj. Prerequisites: Six hours of history or consent of instructor.

**40.312 (368) HISTORY OF MODERN INDIA AND PAKISTAN (3)** The history of the Indian subcontinent since 1750, stressing the rise of British power, the colonial experience, the development of nationalist movements, and the problems of statehood in present-day India, Pakistan, Ceylon, and Nepal. Prerequisite: Six hours of history or consent of instructor.

**40.313 HISTORY OF MODERN SOUTHEAST ASIA (3)** The development of Burma, Thailand, Malaysia, Indonesia, Cambodia, Vietnam, and the Philippines since 1500, with emphasis on the colonial experience and development of modern nationhood. Prerequisite: Six hours of history or consent of instructor.

**40.316 (459) CHINESE HISTORY SINCE 1800 (3)** China from the beginnings of the Western penetration through the Nationalist and Communist revolutions of the twentieth century. Prerequisite: Six hours of history to include either 40.110 or 40.242 or consent of instructor.

**40.317 HISTORY OF MODERN JAPAN (3)** The political, economic, and cultural aspects of Japan's rapid modernization from the mid-nineteenth century and her subsequent expansion, defeat, and recovery. Prerequisite: Six hours of history to include either 40.110, 40.242 or consent of instructor.

**40.321 HISTORY OF MEXICO: PRE-COLUMBIAN AND COLONIAL (3)** The political, economic, social, and cultural developments from early Pre-Columbian civilizations to the movement for independence. Prerequisite: Six hours of lower division history.

**40.322 HISTORY OF MEXICO: NATIONAL PERIOD (3)** The political, economic, social, and cultural developments from Independence to the present. Prerequisite: Six hours of lower division history.

**40.333 (430) SUB-SAHARAN AFRICA (3)** Selected aspects of the development of African cultures, emphasizing changing assumptions and interpretations and the contributions of other disciplines to the reconstruction of Africa's past. Prerequisite: Six hours of history, or three hours of history and three hours of anthropology, archeology, linguistics, or political science; or consent of instructor.

**40.334 HISTORY OF WEST AFRICA: 1500-1885 (3)** The cultural, social, economic, and political institutions of the West African people from 1500 to 1885 with emphasis on the contributions made to African history by the Ashanti, the Old Oyo, the Dahomey, and the Bini. Prerequisite: 40.133 or 40.134 or 10.207 or consent of instructor.

**40.335 A HISTORY OF RECENT AFRICA (3)** The political, economic, cultural, and intellectual forces which shaped the lives of the African people since World War II. Prerequisite: 40.133 or 40.134 or 40.242, or consent of instructor.

**40.345 THE AMERICAN COLONIES: 1492-1763 (3)** Founding and the political, economic, and social development of the American colonies. Prerequisite: 40.145 or 40.241 or consent of instructor.

**40.346 (340) THE AMERICAN REVOLUTIONARY PERIOD: 1763-1789. (3)** From the end of the Seven Years' War to the ratification of the Constitution. Prerequisite: 40.145 or 40.241 or consent of instructor.

**40.347 (346) THE EARLY NATIONAL PERIOD (3)** The United States from the Constitutional Convention to the Election of 1820. The Federalist Decade and the Jeffersonian Era. Prerequisite: 40.145.

**40.348 (347) THE JACKSONIAN ERA (3)** The United States from 1815 to 1845, political, social, and economic currents of the period. Prerequisite: 40.145.

**40.349 (348) THE CIVIL WAR (3)** Sectionalism, the coming of the war, and the war years. Emphasis on political, economic, and social issues. Prerequisites: 40.145 and 40.146.

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**40.350 (349) THE ERA OF RECONSTRUCTION (3)** Political, economic, and social study of the Reconstruction era: the war years to 1877, and its aftermath. Prerequisite: 40.145 and 40.146.

**40.351 (337) THE GILDED AGE (3)** History of the United States from 1877 to 1892 with emphasis on the political, economic, and social questions of the era. Prerequisite: 40.145 and 40.146.

**40.352 (338) THE POPULIST-PROGRESSIVE ERA (3)** History of the United States from 1892-1920 with emphasis on the political, economic, and social questions of the era. Prerequisites: 40.145 and 40.146.

**40.359 (350) RECENT AMERICAN HISTORY: 1920-1945 (3)** History of the United States from the 1920's through World War II, with emphasis on the presidential years of Franklin D. Roosevelt. Prerequisite: 40.146.

**40.360 (351) RECENT AMERICAN HISTORY SINCE 1945 (3)** History of the United States from World War II to the present, including political, social, economic, and diplomatic developments. Prerequisite: 40.146.

**40.361 (413) AMERICAN INTELLECTUAL HISTORY TO 1859 (3)** Main issues in American thought from the colonial period to the publication of Darwin's "The Origin of Species." Emphasis on religious thought, political theory, and ideas in literature. Prerequisite: 40.145 or 30.211.

**40.362 (414) AMERICAN INTELLECTUAL HISTORY SINCE 1859 (3)** Main issues in American thought from the publication of Darwin's "The Origin of Species" to contemporary times. (Emphasis on religious thought, social theory. Ideas in literature and philosophy.) Prerequisite: 40.146 or 30.212.

**40.363 (415) SOCIAL HISTORY OF THE UNITED STATES I (3)** History of American life from the seventeenth century to the present, focusing on problems relating to social structure, popular culture, religious and educational institutions. First semester to 1865. Prerequisite: 40.145.

**40.364 (416) SOCIAL HISTORY OF THE UNITED STATES II (3)** Continuation of 40.363 from 1865 to the present. Prerequisite: 40.146.

**40.365 THE AGRICULTURAL ERA OF AMERICA (3)** A study of the development of agriculture and the commercial, financial, and manufacturing institutions in America from Colonial times to the Civil War. Prerequisite: 40.145.

**40.366 (334) A HISTORY OF AMERICAN BUSINESS (3)** A study of industry, finance, commerce and agriculture from the Civil War to the present. Prerequisite: Consent of instructor plus 3 hours of history.

**40.367 (402) CONSTITUTIONAL HISTORY OF THE UNITED STATES I (3)** Development of American constitutionalism in theory and practice to 1868. Prerequisite: 40.145.

**40.368 (403) CONSTITUTIONAL HISTORY OF THE UNITED STATES II (3)** Continuation of 40.367 since 1868. Prerequisite: 40.146.

**40.369 (451) DIPLOMATIC HISTORY OF THE UNITED STATES TO 1900 (3)** Evolution of the American national interest in foreign relations with Europe, Latin America, and the Far East from colonial times to 1900. Emphasis upon the changing character and role of objectives, policies, commitments, and forces. Prerequisite: 40.145 and 40.146.

**40.370 (452) DIPLOMATIC HISTORY OF THE UNITED STATES SINCE 1900 (3)** Continuation of 40.369 to the present with added interest in the emergence of the United States as a major world power. The role of the United States in modern warfare, world wide economic and financial affairs, overseas expansion, the diplomatic impact of conflict in ideologies, and current international crisis. Prerequisites: 40.145 and 40.146.

**40.371 UNITED STATES RELIGIOUS HISTORY I (3)** The interactions between religion, society, reform, and education in the American past. Emphasis on how religious ideals have shaped American institutions and character. First semester to 1865. Prerequisite: 40.145.

**40.372 UNITED STATES RELIGIOUS HISTORY II (3)** Continuation of 40.371 since 1865. Prerequisite 40 146

**40.373 THE AMERICAN FRONTIER I (3)** The westward movement of the American people and the effect of the frontier process on the social, economic, and political institutions of the United States and on the attitudes of the American people to 1840 Prerequisite 40 145

**40.374 THE AMERICAN FRONTIER II (3)** Continuation of 40.373 since 1840. Prerequisite: 40 146

**40.375 (405) THE CITY IN AMERICAN HISTORY (3)** The development of the city and its impact on American social, cultural, intellectual, political, and economic life. Prerequisite 40 145, 40 146 or two of the following 34 391, 80 344, 68 305 or consent of instructor

**40.377 (407) THE IMMIGRANT IN AMERICAN HISTORY (3)** The history of the immigrant experience in America from the colonial period to the present. Emphasis on migration patterns, receptivity of native society, assimilation and acculturation processes. Prerequisite 40 145 and 40 146

**40.379 INDIAN-WHITE RELATIONS IN AMERICAN HISTORY (3)** The interplay of societal attitudes, cultural beliefs, and official government policy and their impact on the Indian population of North America, from 1492 to the present. Prerequisite Three hours of American history

**40.381 (417) HISTORY OF AFRO-AMERICANS (3)** History of Americans of African ancestry from their West African background to the present. Emphasis on black Americans' thoughts, activities, organizations, and their role in developing America. Prerequisites 40 145 and 40 146

**40.383 AMERICAN RADICALISM SINCE 1890 (3)** Leadership, organization and theories of those who sought fundamental economic change in the United States, emphasis on anarchism, communism, and socialism. Prerequisite Six hours of history or consent of instructor

**40.391 (418) HISTORY OF CANADA (3)** Canadian history with emphasis on the period since 1867. Particular attention will be given to the problems of cultural dualism and confederation. Prerequisite: 40 145 or 40 146 or 40 242 or 68 101

**40.397 (320) HISTORY AND GEOGRAPHY OF MARYLAND (3)** Political, social, and economic development of the state and its relations to major events in the development of the nation. Natural resources, regional land use, industrial development, particularly in the Baltimore area. Field trips \$15 00. Field trip fee payable by the time of registration. Prerequisite 40 145, 40.146, 34 101, and 34.102

**40.400 (420) SEMINAR IN AMERICAN HISTORY (3)** Reading and research dealing with a phase of history to be selected by the instructor, considerable attention to sources and historiography. Prerequisite: Consent of instructor and fifteen hours of history including either 40 290 or 40 490 or 40 498

**40.401 (357) MEDIEVAL CIVILIZATION I (3)** The principal currents of political, social, intellectual, and artistic developments in medieval Europe from the early Middle Ages to about 1050. Prerequisite 40 241

**40.402 (358) MEDIEVAL CIVILIZATION II (3)** Continuation of 40.401 — the high Middle Ages, 1050 to 1350. Prerequisite: 40 241

**40.403 THE RENAISSANCE ERA: 1300-1530 (3)** Political, economic, social and cultural changes in late Medieval and Renaissance Europe. Prerequisite 40 241 or consent of instructor

**40.404 (363) THE REFORMATION: 1500-1648 (3)** Religious, political, economic, and social changes in Reformation and counter-Reformation Europe. Prerequisites 40 241 or consent of instructor

**40.405 (363) EUROPE: 1648-1815 (3)** European state system and expansion of European civilization, intellectual growth and class relationships culminating in the French Revolution and Napoleon. Prerequisite: 40.242

**40.406 (364) EUROPE: 1815-1914 (3)** Major economic, political, social, and intellectual currents of the period. The effects of the industrial revolution, the development of nationalism and imperialism, and the origins of World War I. Prerequisite: 40.242

**40.407 (463) EUROPE: 1914-1939 (3)** Events leading to World War I, the conflict, and the peace which followed. The rise of conflicting political ideologies and the road to World War II. Prerequisites: 40.241 and 40.242

**40.408 (464) EUROPE SINCE 1939 (3)** World War II — diplomacy, strategy, and results. The economic, social, and political recovery of post-war Europe and the development of new alliance structures. Prerequisite: 40.241 and 40.242

**40.413 (425) EUROPEAN MILITARY HISTORY (3)** Wars, inter-war military developments, and civil-military relations seen in the context of European Diplomacy and socio-economic history since Napoleon. Emphasis on the two world wars. Prerequisites: 40.242 or consent of instructor

**40.415 (426) DIPLOMATIC HISTORY OF EUROPE: 1815-1939 (3)** A study in depth of specific diplomatic crises, with emphasis upon the impact of each upon the European Balance of Power. Prerequisite: 40.242

**40.417 (328) ECONOMIC HISTORY OF EUROPE I (3)** A study of European economy to the middle of the Eighteenth century. Particular attention will be given to the development of commerce, capitalism, manufacture, and mercantilism. Prerequisite: 40.241

**40.418 (329) ECONOMIC HISTORY OF EUROPE II (3)** The industrialization of Great Britain, France, German, Russian and Peripheral nations from the middle of the eighteenth century. Prerequisite: 40.242

**40.419 (463) EUROPEAN INTELLECTUAL HISTORY I (3)** Religious, scientific, political, and social theories seen in their historical context from the early Middle Ages to 1789, emphasis on seventeenth and eighteenth centuries. Prerequisite: 40.241 or 40.242 or consent of the instructor

**40.420 (464) EUROPEAN INTELLECTUAL HISTORY II (3)** Religious, scientific, political, and social theories of the European intellectual class seen in their historical context from the French Revolution to the present. Prerequisite: 40.242 or consent of instructor.

**40.421 (470) BRITAIN IN THE TWENTIETH CENTURY (3)** The role of Britain, the Commonwealth, and the Empire. Social reform and World War I. Efforts to recover economic equilibrium. World War II. Decline of the Empire and Socialism. Prerequisites: 40.241, 40.242

**40.431 (428) FRANCE: 1763-1871 (3)** Old Regime and the impact of successive revolutions upon French society. Emphasis upon the role of France in the growth of European liberalism and nationalism. Prerequisite: 40.242

**40.441 (460) GERMANY: 1871-1945 (3)** Brief topical analysis of the nineteenth century background. Concentration on the Bismarckian Empire, Weimar Republic and the Third Reich, emphasizing the inter-relationships between internal developments and Germany's role in Europe and the world. Prerequisite: 40.242.

**40.451 (423) RUSSIA 862-1894 (3)** Political history and theory, social relations, economic, cultural and literary development, and growth of the Russian states. Prerequisites: 40.241 and 40.242 or consent of instructor.

**40.452 (424) RUSSIA/SOVIET UNION 1894-1953 (3)** Political, ideological, economic and cultural factors influencing the fall of the monarchy, the Bolshevik Revolution, Leninism, and Stalinism. Prerequisite: 40.242 or consent of instructor.

**40.461 (419) SEMINAR IN EUROPEAN HISTORY (3)** Reading and research dealing with a phase of history to be selected by the instructor, considerable attention to sources and historiography. Prerequisite: Consent of the instructor and fifteen hours of history including either 40.290 or 40.490 or 40.498

**40.477 (435) MODERN WESTERN COLONIALISM (3)** Expansion of Western culture and institutions with particular reference to their effects on the peoples of Asia and Africa in the period since 1870. Prerequisite: Six hours of Modern European, African, Asian or Latin American history

**40.479 (437) A HISTORY OF DIPLOMACY (3)** Evolution from its origins to the present with emphasis on the modern period. Historic changes which shifting ideologies and new technologies have wrought in the role of the diplomat. Prerequisite: 40.241 and 40.242.

**40.481 HISTORY OF MANAGEMENT (3)** The theory, organization, and operation of selected political, religious, military, economic, and social institutions of the western world. Prerequisite: 3 hours of history, consent of instructor.

**40.483 DIRECTED INDIVIDUAL RESEARCH (2-4)** Research and reading dealing with a historical topic to be selected by the instructor and student; considerable attention to methodology. Prerequisite: Fifteen hours of history and a minimum average of 3.0 in history and consent of the instructor and the Department Chairperson

**40.489 ORAL HISTORY (3)** Lectures, demonstrations, and extensive fieldwork in the techniques and methods essential to collecting tape recorded reminiscences of historical value. Topic of the course to be selected by the instructor. Extra work will be required of graduate students and may not be taken more than one time. Prerequisite: Consent of the instructor and three hours of history appropriate to the topic.

**40.490 INTERPRETIVE PROBLEMS IN HISTORY (3)** An in-depth study of historical interpretations of selected topics. Prerequisite: Twelve hours of history.

**40.491 (214, 215, 216, 217) BIOGRAPHICAL STUDIES IN HISTORY (3)** A study of selected historical figures who have shaped or reflected the past. Figures to be selected by the instructor. Prerequisite: Six hours of history

**40.492 HISTORICAL THEMES (3)** A study through lectures and discussions of a historical topic selected by the instructor. Prerequisite: Six hours of history appropriate to the subject as determined by the instructor

**40.494 (490) TRAVEL AND STUDY (3-6)** Countries and topics to be selected by the Departments and instructors sponsoring the program. For complete information, write the Chairman of the Department early in the fall of the academic year preceding the semester of intended study. Prerequisite: Upper division status and consent of the instructor

**40.495 SEMINAR IN COMPARATIVE STUDIES (3)** Reading and research in history or related disciplines approached from a viewpoint that is primarily historical and dealing with specific topics, problems, or developments selected by the instructor(s). Prerequisite: Consent of the instructor and fifteen hours of history including either 40.290 or 40.490 or 40.498, or six hours of history and a research methods course and six additional hours of the related discipline

**40.496 COLLOQUIUM (3)** Group discussion of reading in history or related disciplines approached from a viewpoint that is primarily historical and dealing with broad periods, topics, problems or comparative developments selected by the instructor(s). Prerequisite: Consent of the instructor and fifteen hours of history or nine hours of history and six hours of the related discipline



**40.497 (485) DIRECTED READING (2-4)** Independent reading in history or related disciplines approached from a viewpoint that is primarily historical and dealing with specific periods, topics, problems or comparative developments selected by the student in consultation with the instructor(s) Prerequisite: Fifteen hours of history or nine hours of history and six hours of the related discipline and a minimum average of 3.0 of history and the related discipline and consent of the Department Chairperson

**40.498 PHILOSOPHY OF HISTORY (3)** The philosophical foundations of historical knowledge: free will versus determinism, development from ancient times to the present of different philosophical interpretations of history Prerequisite: Twelve hours of history or six hours of history and six hours of philosophy

### *Graduate Division*

**40.599 SEMINAR IN UNITED STATES HISTORY TO 1865 (3)** Research dealing with a phase of United States history to 1865 to be selected by the instructor Prerequisite: Graduate standing, eighteen hours of history and consent of the instructor and the department chairperson.

**40.600 SEMINAR IN UNITED STATES HISTORY SINCE 1865 (3)** Research dealing with a phase of United States history since 1865 to be selected by the instructor Prerequisite: Graduate standing, eighteen hours of history and consent of the instructor and the department chairperson

**40.661 SEMINAR IN NINETEENTH CENTURY EUROPEAN HISTORY (3)** Research dealing with a phase of nineteenth century European history to be selected by the instructor Prerequisite: Graduate standing, eighteen hours of history and consent of the instructor and the department chairperson

**40.662 SEMINAR IN TWENTIETH CENTURY EUROPEAN HISTORY (3)** Research dealing with a phase of twentieth century European history to be selected by the instructor Prerequisite: Graduate standing, eighteen hours of history and consent of the instructor and the department chairperson

**40.683 DIRECTED INDIVIDUAL RESEARCH (2-4)** Research and reading dealing with a historical topic to be selected by the instructor and student, considerable attention to methodology Prerequisite: Eighteen hours of history or consent of the instructor and department chairperson.

**40.697 DIRECTED READING IN HISTORY (2-4)** Independent reading in areas of history selected by the instructor and the student Prerequisite: Graduate standing, eighteen hours of history and consent of the instructor and the department chairperson.

## Mathematics

Chairperson: Martin Horak

### *MATHEMATICS COURSES (MATH)*

#### *Upper Division — Undergraduate and Graduate*

**50.331 PROBABILITY (3)** Probability in sample spaces, discrete and continuous random variables, distribution theory, Tchebyshev's theorem, central limit theorem, expected values and moments Prerequisites: 50.274, which course may be taken concurrently

**50.332 MATHEMATICAL STATISTICS (3)** Sample theory and distributions, point estimation, confidence intervals, tests of hypotheses, regression, correlation, and analysis of variance. Prerequisite: 50.331.

**50.357 COLLEGE GEOMETRY (3)** Projective geometry, both synthetic and analytic, including duality, Desargues theorem, harmonic sequences, Pappus, theorem, homogenous coordinates, conics, polarities Prerequisites: 50.261 and 50.273.

**50.361 ALGEBRAIC STRUCTURES (4)** Groups, rings, fields, integral domains, and polynomial rings. Prerequisite: 50 261.

**50.365 LINEAR ALGEBRA (3)** Matrices, vector spaces, determinants, systems of linear equations, linear transformations, characteristic vectors and values, canonical forms. Prerequisite: 50 361

**50.367 THEORY OF NUMBERS (3)** Theory of prime numbers, the division algorithm, the Fundamental Theorem of Arithmetic, polynomials, congruences, number theoretic functions. Prerequisite: 50 261

**50.373 CALCULUS III (4)** Differential and integral calculus of functions of several variables; differential and integral calculus of vector valued functions, including the divergence and Stokes' theorems; selected topics from among Fourier series, Laplace transform, special functions and differential equations. Prerequisite: 50 274

**50.377 MATHEMATICAL MODELS (3)** Consideration of some mathematical problems in sociology, psychology, economics, management science and ecology, and developing appropriate mathematical models and techniques to solve them. Prerequisite: 50 274 or consent of instructor

**50.424 TEACHING THE METRIC SYSTEM (1)** Methods and materials for the teaching of the metric system in the elementary school, and the early junior high. Prerequisites: A methods course in teaching math or previous teaching experience.

**50.425 METHODS AND MATERIALS FOR MATH LAB INSTRUCTION (1-3)** Examination of and experiences with commercial and teacher-made materials designed for a laboratory (activity centered) approach to learning mathematics. Prerequisite: A methods course in teaching mathematics (50 321, 323, 423) or previous teaching experience

**50.427 READINGS IN MATHEMATICS EDUCATION FOR THE ELEMENTARY SCHOOL TEACHER (1-3)** Directed study for the teacher of elementary school mathematics. Prerequisite: 50 321 or 50.323 and approval of instructor. No credit toward mathematics major

**50.429 READINGS IN MATHEMATICS EDUCATION FOR THE SECONDARY SCHOOL TEACHER (1-3)** Directed study for the teacher of secondary school mathematics. (No credit toward mathematics major for Arts and Science students.) Prerequisite: Approval of instructor.

**50.435 NUMERICAL ANALYSIS I (3)** Error analysis, interpolation, numerical differentiation and integration, numerical solution of algebraic equations and of systems of algebraic equations. Prerequisites: 23 235 and 50 274

**50.436 NUMERICAL ANALYSIS II (3)** Numerical solution of differential equations. Least squares and its applications, linear programming and extensions of the concepts of 50 435. Prerequisite: 50 435

**50.451 MATH RESEARCH IN GRAPH THEORY (3)** A course designed to give an advanced mathematics major the opportunity to do independent, significant, research in a field of mathematics through graph theory. Topics may include Hamiltonian and Eulerian graphs, coloring graphs, planar and non-planar graphs, connectivity problems and isomorphic graphs. Prerequisite: Consent of instructor

**50.457 DIFFERENTIAL GEOMETRY I (3)** Curvatures of curves and surfaces in  $E_3$ , geodesics, invariants, mappings and special surfaces. Prerequisite: 50 373

**50.461 ADVANCED TOPICS IN ALGEBRA (3)** Extension of the concepts of 50 361. Prerequisite: 50 365

**50.471 DIFFERENTIAL EQUATIONS (3)** Theory and application of linear ordinary differential equations. Solutions of non-linear ordinary differential equations of the first order. Prerequisite: 50 274.

**50.473 ADVANCED CALCULUS I (3)** Dedekind cuts; Euclidean spaces; compact and connected sets, continuity, uniform continuity, limits, sequences and completeness in a metric space; Heine-Borel theorem; Weierstrass theorem, numerical sequences and series, differentiation, mean value theorem and differentiation of vector valued functions. Prerequisites: 50 261 and 50 274

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**50.474 ADVANCED CALCULUS II (3)** Riemann Stieltjes integral, sequences and series of functions, convergence and uniform convergence, Stone-Weierstrass theorem, and functions of several variables  
Prerequisite: 50 473

**50.475 COMPLEX ANALYSIS (3)** Complex number system, analytic functions, Cauchy's integral theorem and integral formula, Taylor and Laurent series, isolated singularities, Cauchy's residue theorem and conformal mappings  
Prerequisite: 50 373

**50.477 TOPOLOGY (3)** Basic concepts of pointset topology, separation axioms, compact and connected spaces, product and quotient spaces, convergence, continuity and homeomorphisms  
Prerequisite: 50 473

**50.491 READINGS IN MATHEMATICS (1-3)** Independent reading in selected areas of mathematics  
Prerequisite: Consent of instructor

### *Graduate Division*

**50.501 HISTORY OF MATHEMATICS (3)** An historical survey of the classical roots of contemporary mathematics with selected topics chosen from number theory, geometry, analysis and algebra  
Prerequisite: 50 274, 50 353 or 50 357 and 50 361

**50.521 SEMINAR IN TEACHING ARITHMETIC (3)** Analysis of new topics, techniques, and materials in arithmetic instruction. (No credit toward Mathematics major or minor.)  
Prerequisites: 50 321 or 50 323

**50.525 SEMINAR IN MATHEMATICS EDUCATION (3)** An investigation of recent curricula, methods, and materials in secondary school mathematics instruction.  
Prerequisite: 50 423 or equivalent

**50.530 STATISTICS — AN INTEGRATED APPROACH (4)** Theory and practices of basic statistical analysis and inference with emphasis on analyzing and solving real problems using statistics. Descriptive statistics, introduction to probability, sampling distributions, estimation, hypothesis testing, regression, correlation, non-parametric techniques and analysis of variance, computer programming incorporated throughout. Prior knowledge of programming is not necessary. (Not open to those who have had 50 332.)  
Prerequisite: 50 274

**50.531 TOPICS IN PROBABILITY (3)** Review of basic probability theory, types of convergence and limit theorems, elementary stochastic processes, Markov chains, birth and death processes, Gaussian processes. Examples from engineering physical and social sciences, management and statistics  
Prerequisite: 50 331

**50.553 TOPICS IN GEOMETRY (3)** Axiomatic development of Euclidean, elliptic and hyperbolic geometries, the study of the analytic plane, the sphere and the Poincaré model, as models for these axiomatic systems.  
Prerequisites: 50 274 and 50 361

**50.561 ELEMENTS OF GALOIS THEORY (3)** Review of elementary group theory, polynomial rings, algebraic field extensions, Galois theory for fields of characteristic 0, solution of polynomial equations by radicals, other applications of Galois theory  
Prerequisite: 50 365

**50.591 SEMINAR IN MATHEMATICAL APPLICATIONS (3)** Survey with topics to be chosen from: Linear programming theory of games, mathematical biology, econometrics, mathematical ecology, Fourier analysis, integral equations, partial differential equations, diffusion, stochastic processes, production theory, statistical mechanics, fluid dynamics  
Prerequisite: 50 373

### *COMPUTER SCIENCE COURSES*

**23.313 PRACTICUM IN PERIPHERALS (3)** A course limited to students planning to teach data processing to give them practical experience with data processing equipment peripherals. Ten hours per week in a data processing facility with varied supervised experiences. Evaluation by data processing facility supervisor and instructor.  
Prerequisite: 23 212

**23.315 SURVEY OF PROGRAMMING LANGUAGES (3)** Survey of the significant features of existing programming languages with emphasis on understanding the concepts abstracted from those languages. The course covers algorithmic languages such as ALGOL, problem oriented languages such as SNOBOL, theoretically interesting languages such as LISP, and general purpose languages such as FORTRAN and PL/1. Prerequisites: 23 235 and 23 212 or 23 337

**23.337 (50.337) INTRODUCTION TO COMPUTER SCIENCE I (3)** Explores algorithms using a scientific programming language such as FORTRAN. Computer organization, the representation of information in the computer, machine coding and storage devices are topics to be covered. Prerequisite: 23 235

**23.338 INTRODUCTION TO COMPUTER SCIENCE II (3)** Introduces the concepts of hardware and software systems. The hardware concepts of logic design, microprogramming, machine architecture and design are covered. Software systems such as assemblies, macros, loaders, and compilers are covered. An ALGOL type language is used to apply programming techniques to several projects. Recent developments in the computer field are analyzed. Prerequisite: 23 337

**23.339 PROGRAMMING SYSTEMS (3)** This course introduces the student to basic computer organization, machine language programming and the use of assembly language programming. Emphasis will be on the overall structure of machines and programming systems. Prerequisite: 23 212 or 23 338

**23.411 SYSTEMS AND DESIGN (3)** A course designed to guide the student through the stages of the evolution of data processing systems including analyses of present information flow, system specifications, equipment selection, and the implementation of the system to provide an understanding of the skill and knowledge needed for the effective use of data processing equipment in meeting information needs. Prerequisite: 23 339

**23.431 SELECTED TOPICS IN COMPUTER SCIENCE (1-3)** Independent studies in selected areas of computer science. This course may be taken more than once, but not to accumulate more than four credits. Prerequisite: Consent of instructor and nine hours of computer science.

**23.437 FILE AND DATA STRUCTURES (3)** This is a study of the relations which hold among elements of data involved in problems, the structures of storage media and machines, the methods which are useful in representing structured data in storage, and the techniques of storing data, strings, arrays, linear and orthogonal lists. The representation of trees and graphs is covered. Storage systems and structures, symbol tables, searching techniques and sorting techniques are developed. Formal specification of data structures in programming languages and generalized data management systems are investigated. Prerequisite: 23 339

## Modern Languages

Chairperson: Thomas G. Evans

### *FRENCH COURSES (FREN)*

#### *Upper Division — Undergraduate and Graduate*

**32.325 (307) MASTERPIECES OF FRENCH LITERATURE IN TRANSLATION (3)** An intensive study of English translations of a limited selection of works chosen from the acknowledged masterpieces of French literature, presented in chronological order. (Not open to French majors). Prerequisite: English 30 102

**32.401 FRENCH PHONETICS (3)** The pronunciation of contemporary French, drill in pronunciation. Prerequisite: 32 201, 32 202

**32.402 FRENCH LINGUISTICS (3)** The linguistic structure of the French language with an introduction to transformational grammar. Prerequisite: 32 101, 32 302

**32.411 FRENCH LITERATURE OF THE MIDDLE AGES (3)** Selections from the major works of the period from the twelfth through the fifteenth centuries in Modern French Versions. Conducted in French. Prerequisite: 32.321, 32.322.

**32.415 FRENCH LITERATURE OF THE SIXTEENTH CENTURY (3)** Principle works of the major writers of the sixteenth century with special attention to Rabelais, the Pleiade, and Montaigne. Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.421 FRENCH LITERATURE OF THE SEVENTEENTH CENTURY I (3)** Principal works of the major writers in poetry, drama, philosophy, criticism, and the novel, to about 1660. Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.422 FRENCH LITERATURE OF THE SEVENTEENTH CENTURY II (3)** Continuation of French 32.421 from 1660 to 1700. Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.425 (409) FRENCH LITERATURE OF THE EIGHTEENTH CENTURY (3)** Principal works of the major writers with the concurrent literary and philosophical trends. Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.431 (411) FRENCH LITERATURE OF THE NINETEENTH CENTURY I (3)** The rise, flowering, and decline of Romanticism, with the contemporary writers outside the movement. Conducted in French. 32.321, 32.322 or equivalent.

**32.432 (412) FRENCH LITERATURE OF THE NINETEENTH CENTURY II (3)** The major literary figures and doctrines of the latter part of the nineteenth century. Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.441 (413) FRENCH LITERATURE OF THE TWENTIETH CENTURY I (3)** From Gide, Proust, Valéry, Peguy, and Claudel to the Second World War. Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.442 (414) FRENCH LITERATURE OF THE TWENTIETH CENTURY II (3)** Sartre, Camus, Anouilh, and other present day writers. Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.451 (425) FRENCH POETRY I (3)** The development of French poetry from the Middle Ages to the present day. Conducted in French. Prerequisite: 32.321, 32.322.

**32.452 (426) FRENCH POETRY II (3)** The development of French poetry from the Middle Ages to the present day. Conducted in French. Prerequisite: 32.321, 32.322.

**32.461 (421) FRENCH DRAMA I. (3)** The development of French Drama from the Middle Ages to the present day. Conducted in French. Prerequisite: 32.321, 32.322.

**32.462 (422) FRENCH DRAMA II (3)** The development of French Drama from the Middle Ages to the present day. Conducted in French. Prerequisite: 32.321, 32.322.

**32.471 THE FRENCH NOVEL I (3)** From the seventeenth century to Flaubert (theory of the novel as a genre, the novel from *Préciosité* to "La Princesse de Cleves" in the seventeenth century, the picaresque and philosophical novel in the eighteenth century, Balzac and Stendhal in the nineteenth century.) Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.472 THE FRENCH NOVEL II (3)** From Flaubert to the "Nouveau Roman" (evolution of the Novel from Flaubert to Proust, Gide, Malraux, Giono and the theories of the "Nouveau Roman", Robbe-Grillet and Butor.) Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.481 THE CONTE (3)** Emphasis on the realists and some of the more recent authors. Conducted in French. Prerequisite: 32.321, 32.322 or equivalent.

**32.483 SPECIAL TOPICS IN FOREIGN LANGUAGE TEACHING (3)** Studies in the area of language teaching techniques with changing emphasis from year to year. Prerequisite: Consent of the department.

**32.487-488 TRAVEL AND STUDY ABROAD (4 -19 )** Study in a French University. Students will live and take courses at the University of Clermont-Ferrand, France. Dates: Choice of October through June (2 semesters) or February through June 1 (1 semester). Prerequisite: Three years of college French or equivalent.

**32.491 (451) DIRECTED READINGS IN FRENCH LITERATURE (3)** Reserved for superior students under the guidance of a departmental advisor. Conducted in French. Prerequisite: At least three hours of literature study at the 400 level.

**32.492 (452) DIRECTED READINGS IN FRENCH (3)** Similar to 32.491 with concentration on a different subject matter. Conducted in French. Prerequisite: At least three hours of literature study at the 400 level.

## GRADUATE DIVISION

**32.503 HISTORY OF THE FRENCH LANGUAGE (3)** A rapid survey of the major phenomena of French linguistic history. (Some knowledge of Latin is desirable). Conducted in French. Prerequisite: Undergraduate degree in French.

**32.505 FRENCH STYLISTS (3)** Practice in writing and comparison of style of various writers. Intensive and detailed *explications de texte*. Discussion, oral and written reports. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.533 (537) SEMINAR ON FRENCH CLASSICISM I (3)** The origins and underlying ideas of Classicism. Study of main classic writers, with shifting emphasis from year to year. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.534 (537) SEMINAR ON FRENCH CLASSICISM II (3)** The origins and underlying ideas of Classicism. Study of main classic writers, with shifting emphasis from year to year. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.535 HISTORY OF OLD FRENCH LITERATURE (3)** The history of French literature from the eleventh to the fifteenth centuries, with illustrative readings. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.536 FRENCH LITERATURE OF THE RENAISSANCE (3)** Seminar on French Literature of the sixteenth century, concentrating on one or two major writers, with shifting emphasis from year to year. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.538 SEMINAR IN EIGHTEENTH CENTURY FRENCH LITERATURE (3)** The literature of the French Enlightenment concentrating on one or two major authors, with shifting emphasis from year to year. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.539 THE ROMANTIC ERA IN FRANCE (3)** Sources and theories of French romanticism. Works of major French romantic writers, with shifting emphasis from year to year. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.540 THE LATE NINETEENTH CENTURY IN FRANCE (3)** A study of the main writers of the later nineteenth century, with shifting emphasis from year to year. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.541 PERSPECTIVES OF TWENTIETH CENTURY LITERATURE I (3)** Critical study of a major Twentieth Century writer (1st semester — 1880-1930) with shifting emphasis from year to year. Prerequisite: Undergraduate degree in French or permission of instructor.

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**32.542 PERSPECTIVES OF TWENTIETH CENTURY LITERATURE II (3)** Critical study of major Twentieth Century writer (2nd semester — contemporary) with shifting emphasis from year to year. Prerequisite: Undergraduate degree in French or permission of instructor.

**32.543-544 CRITICAL APPROACHES TO FRENCH LITERATURE I, II (3,3)** A history of French literary criticism leading to the study of the various techniques and objectives of all literary criticism and analysis, eventuating in the application of these techniques by the student himself to selected works of French literature. Conducted in French. Prerequisite: Undergraduate degree in French.

**32.555-556 FRENCH REALISM AND NATURALISM I, II (3,3)** The main works of Balzac, Stendhal, Flaubert, Les Concourt, Zola, Maupassant and Daudet with shifting emphasis from year to year. Conducted in French. Prerequisite: Permission of instructor.

### **GERMAN COURSES (GERM)**

#### *Upper Division — Undergraduate and Graduate*

**36.325 (307) MASTERPIECES OF GERMAN LITERATURE IN TRANSLATION (3)** An intensive study of English translations of a number of acknowledged masterpieces of German literature. Prerequisite: ENGL 30 102.

**36.401 (36.395) GERMAN PHONETICS (3)** The pronunciation of contemporary German, drill in pronunciation. Prerequisite: Completion of 36 201-202.

**36.411 (407) MEDIEVAL GERMAN LITERATURE (3)** Special emphasis on the flowering period of epic and lyric poetry. Readings are in New High German translation. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.421 (409) HUMANISM, REFORMATION AND THE BAROQUE (3)** A survey of the philosophy and literature from the end of the Middle Ages to 1750. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.425 (411) PRE-CLASSICISM (3)** German literature from the end of the Baroque to the beginnings of Classicism. Focus on the Aufklärung and Sturm und Drang. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.427-428 CLASSICISM I, II (3,3)** First semester, the beginnings of German classicism: Goethe, Schiller, Lessing; second semester, the later works of Goethe and Schiller. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.431 (415) ROMANTICISM (3)** German literature during the Romantic era (1790-1830): Hölderlin, Novalis, Tieck, Brentano, Grillparzer. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.432 (417) REALISM (3)** Study of German literary realism from the Vormärz through Poetic Realism: Heine, Büchner, Hebbel, Wagner, Keller, Fontane. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.441 (423) MODERN GERMAN LITERATURE (3)** The modern masters: Kafka, Mann, Hesse, Rilke, Brecht. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.442 (424) GERMAN LITERATURE SINCE 1945 (3)** Themes and movements since World War II: Poetry: Eich, Enzenberger, Celan, Bachmann; prose: fiction: Boll, Grass; drama: Borchert, Dürrenmatt, Frisch. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.451 STUDIES IN THE GERMAN LYRIC (3)** Focus on a particular period, movement or author, to be determined after consultation with majors. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.461 GERMAN DRAMA OF THE NINETEENTH AND TWENTIETH CENTURIES (3)** The development of modern German drama in the successive literary movements, beginning with Kleist. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.465 (441) GOETHE'S FAUST (3)** A study of the background, themes and structures of this masterpiece. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.471 (429) THE GERMAN NOVEL (3)** A study of the origins and development of the genre in German literature. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.481 THE GERMAN NOVELLE (3)** The theory and development of the Novelle in German literature from Goethe to the present. Conducted in German. Prerequisite: 36 321-322 or equivalent.

**36.483 SPECIAL TOPICS IN FOREIGN LANGUAGE TEACHING (3)** Studies in the area of language teaching techniques with changing emphasis from year to year. Prerequisite: 27 353 Teaching Modern Foreign Languages in the Secondary Schools or equivalent.

**36.491 DIRECTED READINGS IN GERMAN LITERATURE (3)** Reserved for superior students under the guidance of a departmental advisor. Content related to student's previous program. Prerequisite: At least three hours of study at the 400 level.

**36.492 (452) DIRECTED READINGS IN GERMAN LITERATURE (3)** Reserved for superior students under the guidance of a departmental advisor. Content related to student's previous program. Prerequisite: At least three hours of study at the 400 level.

## **SPANISH COURSES (SPAN)**

### *Upper Division — Undergraduate and Graduate*

**82.325 MASTERPIECES OF SPANISH LITERATURE IN TRANSLATION (3)** An intensive study of English translations of a limited selection of works chosen from the acknowledged masterpieces of Spanish literature, presented in chronological order (not open to Spanish majors). Prerequisite: ENGL 30 102.

**82.401 SPANISH PHONETICS (3)** The pronunciation of contemporary Spanish, drill in pronunciation. Prerequisite: 82 202.

**82.402 SPANISH LINGUISTICS (3)** The linguistic structure of the Spanish language with an introduction to transformational grammar. Prerequisite: 82 301, 82 302.

**82.417- 418 THE GOLDEN AGE IN SPANISH LITERATURE I, II (3,3)** Principal attention to Cervantes, Tirso de Molina, Lope de Vega, and Ruiz de Alarcón, Góngora and his role. Conducted in Spanish. Prerequisite: 82 321-322 or equivalent.

**82.431 (411) NINETEENTH CENTURY SPANISH LITERATURE (3)** The main literary movements of the century: neo-classicism, romanticism, realism, naturalism, and special emphasis on "costumbrismo." Conducted in Spanish. Prerequisite: 82 321-322 or equivalent.

**82.435 NINETEENTH CENTURY SPANISH AMERICAN LITERATURE I (3)** Principal works of the major writers to about 1860. Conducted in Spanish. Prerequisite: 82 321, 82 322 or equivalent.

**82.436 NINETEENTH CENTURY SPANISH AMERICAN LITERATURE II (3)** Principal works of the major writers from 1860 to 1900. Conducted in Spanish. Prerequisite: 82 321, 82 322 or equivalent.

**82.441 (413) TWENTIETH CENTURY SPANISH LITERATURE I (3)** Special attention to the literary movement called "The Generation of '98." Conducted in Spanish. Prerequisite: 82 321, 82 322 or equivalent.

**82.442 (414) TWENTIETH CENTURY SPANISH LITERATURE II (3)** The writers of the last thirty years. Conducted in Spanish. Prerequisite: 82 321, 82 322 or equivalent.

**82.443 TWENTIETH CENTURY SPANISH AMERICAN LITERATURE I (3)** Modernism to the Contemporary Period. Conducted in Spanish. Prerequisite: 82 321, 82 322 or equivalent.

**82.444 TWENTIETH CENTURY SPANISH AMERICAN LITERATURE II (3)** The Contemporary Period. Conducted in Spanish. Prerequisite: 82 321, 82 322 or equivalent.

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**82.451 (425) SPANISH POETRY I (3)** Special emphasis on Gustavo Adolfo Bécquer, Rubén Darío, Antonio Machado. Conducted in Spanish. Prerequisite: 32.321-322 or equivalent.

**82.452 (426) SPANISH POETRY II (3)** Emphasis on the poets of the generation of 1927: Pablo Neruda, and Vicente Aleixandre. Conducted in Spanish. Prerequisite: 82.321-322 or equivalent.

**82.461 (421) SPANISH DRAMA I (3)** Nineteenth and early twentieth century. Conducted in Spanish. Prerequisite: 82.321-322 or equivalent.

**82.462 (422) SPANISH DRAMA II (3)** Contemporary playwrights such as Casona, Usigli, and Vallejo. Conducted in Spanish. Prerequisite: 82.321-322 or equivalent.

**82.471 (423) SPANISH NOVEL I (3)** Emphasis will be given to Benito Pérez Galdós and Pío Baroja. Conducted in Spanish. Prerequisite: 82.321-322 or equivalent.

**82.472 (424) SPANISH NOVEL II (3)** Emphasis on contemporary writers including Camilo José Cela, Miguel Ángel Asturias, Ramón Sender, Juan Goytisolo. Conducted in Spanish. Prerequisite: 82.321-322 or equivalent.

**82.481 (427) SPANISH SHORT STORY (3)** The short story in Spain and Spanish America with emphasis on twentieth century authors. Conducted in Spanish. Prerequisite: 82.321, 82.322 or equivalent.

**82.483 SPECIAL TOPICS IN FOREIGN LANGUAGE TEACHING (3)** Studies in the area of language teaching techniques with changing emphasis from year to year. Prerequisite: 27.353 Teaching Modern Foreign Languages in the Secondary Schools or equivalent.

**82.491 (451) DIRECTED READING IN SPANISH LITERATURE (3)** Reserved for superior students under the guidance of a departmental advisor. Conducted in Spanish. Prerequisite: At least three hours of literature study at the 400 level.

**82.492 (452) DIRECTED READING IN SPANISH (3)** Similar to SPAN 82.491 with concentration on a different subject matter. Conducted in Spanish. Prerequisite: At least three hours of literature study at the 400 level.

### *Graduate Division*

**82.503 HISTORY OF THE SPANISH LANGUAGE (3)** Survey of the development of the Spanish language from its origins to present day in Spain and in Spanish-America. Prerequisite: Undergraduate degree in Spanish.

**82.505 SPANISH STYLISTICS (3)** Intensive and detailed analysis of selected texts. Discussion and oral reports. Required weekly compositions. Prerequisite: Undergraduate degree in Spanish.

**82.521 SEMINAR IN UNAMUNO (3)** Life's tragedy: conflict between reason and faith as shown in his novels, theatre, essays, and poetry. Conducted in Spanish. Prerequisite: B.A. or 18 hours credit of Spanish beyond intermediate or permission of instructor.

**82.531 SEMINAR ON BENITO PEREZ GALDOS (3)** His version of the condition of man in nineteenth century Spain and his effort to improve society by changing individual behavior. Conducted in Spanish. Prerequisite: B.A. degree in Spanish.

**82.535 SPANISH LITERATURE OF THE MIDDLE AGES (3)** Reading, discussion and analysis of early Spanish literature. Prerequisite: Undergraduate degree in Spanish.

**82.536 POETRY AND DRAMA OF THE SPANISH GOLDEN AGE (3)** Graduate study of major writers of the Siglo de Oro, with shifting emphasis from year to year. Conducted in Spanish. Prerequisite: B.A. degree in Spanish.

**82.539 CRITICAL APPROACHES TO SPANISH LITERATURE (3)** Study and analysis of the formal aspects of selected Spanish literary texts. Prerequisite: Undergraduate degree in Spanish.

**82.541 SEMINAR IN RAMON DEL VALLE-INCLAN (3)** Analysis and discussion of the works of Ramón del Valle-Inclán. Prerequisite: Undergraduate degree in Spanish.

**82.551 SEMINAR IN PIO BAROJA (3)** Analysis and discussion of the works of Pio Baroja. Prerequisite: Undergraduate degree in Spanish.

**82.553 MIGUEL DE CERVANTES (3)** *Don Quijote de la Mancha* and the *Novelas Ejemplares*, reading and detailed analysis. Prerequisite: Undergraduate degree in Spanish.

## Music

Chairperson: Golden Arrington

Graduate Studies Coordinator

Music Education Program: Clifford D. Alper

### *MUSIC COURSES (MUSC)*

#### *Upper Division — Undergraduate and Graduate*

**54.401 MUSIC PRIOR TO 1600 (3)** The art of music in the West from its tentative beginnings in Greek and Hebrew to the year 1600 A.D. Prerequisite: Consent of Department Chairperson.

**54.402 MUSIC OF THE BAROQUE PERIOD (3)** Style, forms, and musical techniques from 1600 to 1750. Prerequisite: Consent of Department Chairperson.

**54.403 MUSIC OF THE CLASSICAL PERIOD (3)** Styles, forms and techniques of the period from 1750 to 1820. Particular emphasis is placed on instrumental categories of the string quartet, sonata, symphony and concerto as illustrated in the works of Haydn, Mozart and Beethoven. Attention is given to operatic and sacred compositions of the same masters. Prerequisite: Consent of Department Chairperson.

**54.404 MUSIC OF THE ROMANTIC PERIOD (3)** Musical styles, forms and techniques in the nineteenth century with special attention to the intellectual foundations of the Romantic movement. Prerequisite: Consent of Department Chairperson.

**54.405 CONTEMPORARY MUSIC (3)** Styles, forms and musical techniques since 1900. Prerequisite: Consent of Department Chairperson.

**54.406 SURVEY OF SOLO VOICE LITERATURE (3)** A musical survey of the solo art-song form circa 1750 to the present. Prerequisite: 54.232 or consent of instructor.

**54.407 COUNTERPOINT (3)** A study of the polyphonic practices employed in 18th Century tonal counterpoint. Prerequisite: 54.232.

**54.408 (400) ORGANIZATION AND ADMINISTRATION OF MUSIC EDUCATION (3)** Seminar discussion of the problems of organization and administration of music education. Prerequisite: Music Student Teaching and/or consent of instructor.

#### **54.409-410 TEACHING OF STRINGED INSTRUMENTS I, II (3,3)**

**54.411 SURVEY OF OPERA (3)** Study of opera literature of various periods and styles. Prerequisite: Consent of Department Chairperson.

**54.412 WIND ENSEMBLE (1)** Study and performance of advanced wind literature by a small band of selected instrumentalists. Prerequisite: Audition required.

**54.413 SYMPHONIC LITERATURE (3)** Orchestral music from the baroque to the present. The concerto, symphony, overture and other orchestral forms are examined. Prerequisite: Consent of Department Chairperson.

**54.419 WORKSHOP: ASPECTS OF STRING TEACHING (2)** An extension course to be offered in Maryland Regional Center for the Arts near Emmitsburg, Maryland. A series of lectures, concerts, and rehearsals designed to enrich the experience of the string teacher and those interested in teaching strings in the public schools. Students will be offered either forty-five contact hours or thirty hours and an individual project. Sessions will be either one or two weeks in length. Prerequisite: Fulfillment of all requirements for teacher certification in instrumental music before taking course.

**54.421 AMERICAN MUSIC (3)** American music from the Colonial Period to the present. Prerequisite: Consent of Department Chairperson.

**54.423 HISTORY OF JAZZ (3)** Development of jazz and its peripheral effects upon music.

**54.424 ADVANCED WOODWINDS (DOUBLE REEDS) (3)** Study of advanced techniques on bassoon and oboe. Special emphasis given to reed-making and instrument repair. Prerequisite: 54.224 or consent of instructor.

**54.425 ADVANCED PERCUSSION (3)** Study of advanced performance techniques on all percussion instruments. Prerequisite: 54.215 or consent of instructor.

**54.427-428 JAZZ ARRANGING I, II (3,3)** Study and practice of arranging of standard material for Jazz Ensembles. Prerequisite: 54.232 or consent of instructor.

**54.429-430 JAZZ IMPROVISATION I, II (3,3)** Study and practice of improvising in various jazz styles. Prerequisite: 54.231-232 or consent of instructor.

**54.431 (535) ADVANCED CHORAL AND INSTRUMENTAL ARRANGING (3)** Advanced arranging techniques including the scoring of original and other works for various combinations of instruments and/or voices. Prerequisite: 54.335 or equivalent or consent of instructor.

**54.433 ADVANCED THEORY (3)** Continued development of skills in more advanced melodic, harmonic, and rhythmic aspects of music through hearing, playing and writing. Prerequisite: 54.232.

**54.435 FORM AND ANALYSIS (3)** Analysis of vocal and instrumental literature. Prerequisite: 54.231-232.

**54.449-450 STRING ENSEMBLE (1,1)** Study and performance of advanced string literature, required of all students concentrating in string instruments. May be repeated for credit. Prerequisite: Admission by audition with the director.

**54.459-460 COMMUNITY CHORUS (1,1)** Study and performance of advanced choral literature. May be repeated for credit. Prerequisite: Admission by audition with the director.

**54.467-468 ORCHESTRA (1,1)** Study of orchestral literature. Open to all students by audition. May be repeated for credit.

**54.469-470 BAND (1,1)** Study and performance of band literature. Open to all students by audition. May be repeated for credit.

**54.471-488 PRIVATE LESSONS (1-3)** Refer to MUSIC 171-186 for course description, fee and time. Prerequisite: Permission of Department Chairperson.

**54.493 INDEPENDENT RESEARCH IN MUSIC LITERATURE (3)**

### *Graduate Division*

**54.501 CURRENT TRENDS IN MUSIC AND MUSIC EDUCATION (SEMINAR) (3)** A survey of current philosophies and objectives of music in the schools, and the scope and sequence of the music curricula, vocal and instrumental, on the elementary and secondary levels. Prerequisite: Admission to the Graduate Program.

**54.515 THE CONCERTO (3)** A survey of the concerto form from its inception to the present. Analysis of stylistic, formal, and compositional aspects will be included. Prerequisite: Admission to Graduate standing with Music major or consent of Department Chairperson.

**54.539 MUSIC COMPOSITION (3)** Analysis and discussion of works of major composers. Writing of original compositions in vocal and instrumental idioms. Prerequisite: 54.232, 54.335, 54.435

**54.562 SEMINAR IN CHORAL (VOCAL) MUSIC (3)** Comparative analysis of current methods and materials used in schools and colleges. Choral conducting and repertoire. Style, interpretation, tone quality, diction, rehearsal and conducting techniques are analyzed. Prerequisite: Admission to the Graduate Program.

**54.571-588 PRIVATE LESSONS (1-3)** Refer to MUSIC 171-188 for course description, fee and time.

**54.595 RESEARCH METHODS IN MUSIC AND MUSIC EDUCATION (3)** The application of methods of research to problems in the field of music and music education, the preparation of bibliographies and specialized techniques for the location, collection and treatment of data. The written exposition of research projects in the area of the student's major interest. Prerequisite: Admission to the Graduate Program

**54.697 THESIS PROJECT (3)** Thesis project includes: Graduate Recital or musical composition in lieu of thesis

**54.699 MASTER'S THESIS IN MUSIC (3)**

### *MINIMESTER ONLY*

**54.002 EDITING BRASS MUSIC: RENAISSANCE AND BAROQUE (3)** Identification of music in primary sources in the Library of Congress and other libraries; editing that music for use in contemporary brass groups. Regular readings of the music on our own instruments, a concert presentation at the end of the minimester. Prerequisite: Ability to perform on a brass instrument.

## Philosophy and Religion

Chairperson: Charles R. Eberhardt

### *PHILOSOPHY AND RELIGION COURSES (PHIL)*

#### *Upper Division — Undergraduate and Graduate*

**58.301 PHILOSOPHIES OF INDIA (3)** Examination of some major philosophical systems through selected writings in translation. Prerequisite: One course in philosophy or consent of instructor.

**58.302 PHILOSOPHIES OF CHINA AND JAPAN (3)** Examination of some major philosophical systems through selected writings in translation. Prerequisite: One course in Philosophy or consent of instructor.

**58.321 PRE-SOCRATIC AND CLASSICAL GREEK PHILOSOPHY (3)** Prerequisite: 58.101 or consent of department.

**58.322 LATE CLASSICAL AND MEDIEVAL PHILOSOPHY (3)** Prerequisite: Should not be attempted without having taken 58.101 or 58.321.

**58.323 LATE MEDIEVAL AND RENAISSANCE PHILOSOPHY (3)** Prerequisite: Should not be attempted without having taken 58.101 or 58.321.

**58.324 MODERN PHILOSOPHY (3)** The history of Philosophy beginning with Descartes through the 19th Century. Prerequisite: Should not be attempted without having taken 58.101 or 58.321

**58.325 SCHOOLS OF CONTEMPORARY PHILOSOPHY (3)** A survey with varying emphases on a number of such contemporary philosophical positions as pragmatism, phenomenology, local positivism, the analysts, neo-Aristotelianism, the philosophers of science, and the existentialists. Prerequisite: Should not be attempted without having taken 58.101 or 58.321.

Philosophy and religion/99

**58.470-479 PHILOSOPHICAL PROBLEMS (3,3,3,3,3,3,3,3,3,)** A consideration of one of the perennial interests of philosophy Prerequisites: 58.203, one other lower level course in philosophy, and philosophy, and consent of department.

# Physical Education

Chairperson; Women's Physical Education: Corinne T. Bize  
Chairperson; Men's Physical Education: Robert Zeigler

\* Prefix for co-education is 60, prefix for men is 61, prefix for women is 62

**60.412 THEORY AND ANALYSIS OF GYMNASTICS MOVEMENT (3)** Theoretical and practical application of mechanical analysis of movement concepts as related to proper execution of skills in gymnastics. The techniques and methods used in this course are designed to provide the teacher a logical system for presenting gymnastic skills to facilitate learning for the student, to demonstrate that gymnastic skills are logically founded on basic physics or terrestrial mechanics, to present aiding and spotting techniques.

**60.421 PHYSICAL EDUCATION PROGRAM IN THE ELEMENTARY SCHOOLS (3)** Aims of the physical education program, appropriate outcomes for different age levels and the selection and use of materials that contribute to the accomplishment of these objectives. Current issues and research concerned with elementary school physical education programs. Prerequisite: General education requirement in physical education, Elementary Physical Education 60.101-102

**60.425 MODERN DANCE IN THE SECONDARY SCHOOL (3)** Exploration into the variety of methods and materials available for the teacher of Modern Dance at the secondary school level  
Prerequisite: Modern Dance I or its equivalent or permission of instructor

100

**60.453 ORGANIZATION AND ADMINISTRATION OF ATHLETICS (3)** Designed to aid those persons responsible for organizing and administering intramural and interschool athletic programs. Study will be made of competitive programs on all educational levels with special emphasis on the secondary school. Prerequisite: Upper division standing in physical education or coaching or administrative experience.

**60.471 PERCEPTUAL-MOTOR DEVELOPMENT IN PHYSICAL EDUCATION (3)** The purpose of the course is to provide the teacher of physical education with a basic knowledge of the area of Perceptual-Motor Development. The following areas will be examined: Perceptual-Motor Programs and Theories, Perceptual-Motor Testing Programs, Related Research, Sensory Input and Motor Output. Prerequisite: Teaching Physical Education in the Elementary School, 60.324.

**60.485 SELECTED TOPICS IN PHYSICAL EDUCATION (3)** Workshop designed for study of special topics of current interest in physical education. Content varies and will focus on substantive material or operational problems. Prerequisite: Consent of the director of the workshop and graduate coordinator.

### *Graduate Division*

**60.509 PSYCHOLOGY OF MOTOR LEARNING (3)** Investigation of the various psychological factors that affect the acquisition of motor skills. Emphasis will be focused on teaching and practice methodology, motivational factors, learning theories, physical and motor considerations, anxiety, stress, tension, competition, mental practice, transfer of training, level of aspiration, etc. Prerequisite: Consent of graduate coordinator.

**60.512 SIGNIFICANT PERIODS IN PHYSICAL EDUCATION (3)** An examination of the influence of Greek, Roman, European, and English concepts of physical education upon American physical education. Emphasis on the formation and development of American concepts of physical education. Consent of graduate coordinator.

**60.513 ANALYSIS OF PHYSIOLOGICAL CONCEPTS (3)** Analysis of research and laboratory application of the physiological factors that affect human efficiency before, during and after exercise. Factors to be investigated include: metabolism, circulation-respiration, muscular physiology, endocrine system, ergogenic aids, environmental factors, etc. Prerequisites: Consent of department chairperson. Major in Physical Education or major in a suitable science area, and consent of graduate coordinator.

**60.530 MECHANICAL ANALYSIS OF MOVEMENT (3)** Various basic mechanical principles are analyzed as they relate to efficient human movement. The physical laws to be studied are leverage, motion, projectiles, gravity, buoyancy, and equilibrium. The design of the course will be research oriented. Prerequisites: Kinesiology 60.311 and an undergraduate major in physical education and consent of the graduate coordinator.

**60.533 ADMINISTRATION AND SUPERVISION OF PHYSICAL EDUCATION (3)** Designed to acquaint the student with the scope, problems and techniques of administering and supervising a program of physical education. The work of the chairperson of the department, problems of personnel, program, facilities, and evaluation will be discussed. Prerequisites: Undergraduate degree in Physical Education and consent of graduate coordinator.

**60.539 CRITICAL ANALYSIS OF CURRENT LITERATURE IN PHYSICAL EDUCATION (3)** Designed to facilitate the depth and quality of the knowledge of students, teachers, administrators, supervisors and research personnel in their assessment and investigation of the following aspects of the physical education profession: contemporary leaders, books, journals, periodicals, projects, trends, issues, innovation, etc. Prerequisite: Undergraduate degree in physical education or consent of graduate coordinator.

**60.541 EVALUATIVE TECHNIQUES IN PHYSICAL EDUCATION (3)** Designed primarily to develop analytical ability in the administration, assessment, and interpretation of test results. Research and laboratory application involves the evaluation of measurements of classification indexes, power, agility, balance, flexibility, kinesthetic perception, speed and reaction time, strength, muscular endurance, cardiovascular condition, sport skills, etc. Prerequisites: Undergraduate major in physical education and consent of graduate coordinator.

**60.545 FACILITIES AND EQUIPMENT FOR PHYSICAL EDUCATION (3)** Designed to cover the principles of programming and planning facilities for physical education. Indoor and outdoor activity areas will be studied as well as their maintenance. Procedure related to selection, purchase and care of equipment will be included. Prerequisites: Undergraduate degree with a major in Physical Education and consent of the graduate coordinator.

**60.547 RESEARCH SEMINAR (3)** Individual research on a significant problem through consultation with designated faculty members. Focus will be on the experimental design and the proper structural format for project or thesis formulation. Prerequisites: EDUC 29.691, as well as undergraduate major in Physical Education and consent of graduate coordinator.

**60.551 COMPARATIVE PHYSICAL EDUCATION-CONTEMPORARY AND INTERNATIONAL (3)** A comparative analysis of contemporary patterns of physical education in selected countries throughout the world. Prerequisites: Undergraduate major in physical education and consent of graduate coordinator.

**60.553 CONTEMPORARY PHYSICAL EDUCATION CURRICULUM (3)** Curriculum design for elementary and secondary school physical education. Examination of current literature pertinent to aims, objectives, content, and method of physical education. Prerequisites: Teaching experience, undergraduate physical education major and consent of graduate coordinator.

## Physics

Co-Chairperson: Robert W. Johnson

Co-Chairperson: Jacob W. Huang

### *PHYSICAL SCIENCE COURSES (PHSC)*

#### *Upper Division — Undergraduate and Graduate*

**64.303 EARTH-SPACE SCIENCE IN CHILDHOOD EDUCATION (3)** Physical Sciences principles applied in study of earth and space. Emphasis on the individualized experimental and discovery approach. Required of Elementary Education students. Prerequisite: 64.101.

**64.322 GEOMORPHOLOGY OF THE EASTERN UNITED STATES (3)** Extent, nature, and geological history of the geomorphic provinces of the eastern United States. Emphasis on the middle Atlantic states. Field excursions in the Maryland area. Prerequisite: 64.121.

**64.401 ADVANCED LABORATORY IN PHYSICAL SCIENCE (2)** Exacting laboratory work of an advanced nature under the guidance of the Physical Sciences Group staff. Each student will present and defend his work at a seminar. Prerequisite: Consent of instructor.

**64.405 FUNDAMENTAL CONCEPTS IN THE EARTH SCIENCES (3)** Principles of astronomy, geology and related earth sciences. Methods of investigation employed by earth scientists. Observations in the planetarium and field studies in the Baltimore area. Two lecture hours and one two-hour laboratory period. Prerequisite: 64.101 or equivalent. No credit allowed if student has taken 64.211 (Astronomy) and/or 64.121 (Geology).

### **64.495 COURSE RESEARCH IN 400-LEVEL COURSES**

### *PHYSICS COURSES (PHYS)*

#### *Upper Division — Undergraduate and Graduate*

**66.301 MECHANICS (4)** Systems of coordinates and kinematics, Newtonian dynamics of particles and linear systems, including planetary motion and oscillations in damped and undamped systems, mechanics of continuous systems, gravitation, rigid body rotation, Lagrange's equations. Four lecture hours. Prerequisites: 66.222 or 66.212, MATH 50.274.



**66.302 THERMODYNAMICS AND KINETIC THEORY (3)** Principles and laws of classical thermodynamics applied to simpler irreversible processes, including chemical, elastic, electric and magnetic phenomena, thermodynamic functions and Maxwell's relations, the conservation equations in elementary kinetic theory, fluctuations and irreversible transfer effects. This course may be taken concurrently with 66.212 or 66.222 with permission. Three lecture hours. Prerequisite: 66.212 or 66.222.

**66.305 ELECTRICITY AND MAGNETISM (4)** Theorems of Gauss and Stokes as applied to electrostatics and magnetostatics; diamagnetism and paramagnetism, steady and transient current effects, alternating currents, conduction in gases, photoelectricity; and electron theories of solid state phenomena, the classic treatment of Maxwell-Lorentz electromagnetic and propagation effects. And possibly the following topics will be included: the special theory of relativity; introduction to microwaves and wave guides; plasma physics and magnetohydrodynamics. Four lecture hours. Prerequisites: 66.212 or 66.222 MATH 50.274.

**66.311 MODERN PHYSICS (4)** The specific details of this course will be changed from time to time as necessitated by student interests and needs. In general, the intermediate principles and applications of relativity, quantum physics, elementary particles, nuclear physics and solid state theory will serve as the foundation for additional specialized developments of current interest. Four lecture hours. Prerequisites: 66.222 or 66.212. MATH 50.274.

**66.313 HISTORY AND PHILOSOPHY OF PHYSICS (2)** The works of Sarton, Cohen, Singer and Dampier on the history and significance of physical concepts. The philosophical concepts of Bridgman, Russell, Heisenberg and other contemporaries interpreted in the historical development. Two lecture hours.

**66.321 INTRODUCTORY MATHEMATICAL PHYSICS (3)** As the mathematical maturity of the students will allow, selected topics will be examined such as the generalized expressions for forces and potentials, vector analysis, applications of Fourier Series and complex variables, and solutions of the harmonic oscillator and wave equations. Three lecture hours. Prerequisites: 66.222 or 66.212, MATH 50.373 or concurrently.

**66.335 (425) BASIC ELECTRONICS (4)** Circuit components, characteristics of semiconductors, electrical measurements, method of circuit analysis, electronic devices. Three lecture hours and one three-hour laboratory period. Prerequisite: 66.212 or 66.222 or consent of instructor.

The following three, single-semester courses (66.385-386-387), called **ADVANCED PHYSICS LABORATORY**, may be taken independently subject to the requirements as specified for each. Three laboratory hours and three hours of independent work:

**66.385 MECHANICS AND HEAT (3)** Equilibrium of rigid bodies; moments of inertia; laws of angular motion; physical and torsional pendulums; servomechanisms; surface tension; vapor pressure and hygrometry; viscosity of fluids; continuous flow calorimetry; thermal conductivity; black-body radiation, acoustics. Prerequisite: 66.301 or concurrently.

**66.386 MODERN PHYSICS (3)** Millikan oil drop experiment,  $e/m$  measurement, photoelectric effect, electron diffraction, Franck-Hertz experiment, radioactivity, lasers, soft x-ray and additional specialized developments of current interests. Prerequisite: 66.311 or concurrently.

**66.387 ELECTRICITY AND OPTICS (3)** Kirchoff's laws; potential differences; galvanometer measurements; resistance thermometers, fuel cells; thermoelectricity; indices of refraction — of lenses; interference effects; spectroscopy. Prerequisite: 66.305 is a requirement which may be taken concurrently.

#### **66.395 COURSE RESEARCH IN 300-LEVEL COURSES**

**66.401-402 PHYSICS SEMINAR I,II (1,1)** Students participate in colloquia on topics of current interests in physics research under guidance of instructor. One lecture hour. Prerequisite: Senior standing or consent of instructor.

**66.411 PHYSICAL OPTICS (3)** Electromagnetic theory of light, wave solutions, interference, diffraction, scattering, radiation from coherent and incoherent sources, elementary theory of masers and lasers. Three lecture hours. Prerequisite 66.305 or consent of instructor.

**66.435 ELECTRONICS (3)** A course on electronics circuits with primary emphasis on basic factors entering into the design and use of electronic instruments for research. Topics presented will include application of operational amplifiers, switching and pulse circuits, digital integrated circuits, input and output devices, and will include practical construction of these circuits. Two lecture hours and one two-hour laboratory. Prerequisites 66.305, 66.335

**66.471 INTRODUCTORY QUANTUM MECHANICS (3)** The Schrodinger equation, states of one particle in one dimension, potential barrier problems in one dimension, the harmonic oscillator, system of particles in one dimension, motion in three dimensions, angular momentum, spin, applications to atomic physics. Prerequisites 66.301, MATH 50.373

**66.472 INTRODUCTION TO STATISTICAL MECHANICS (3)** Distribution functions, micro-canonical, canonical and grand canonical ensembles, the partition function and thermodynamic relations, Fermi-Dirac and Bose-Einstein statistics, some simple models and applications, the Maxwell-Boltzmann transport equation and the hydrodynamic equation, transport coefficients. Three lecture hours. Prerequisite 66.471

**66.496 INDEPENDENT STUDY IN PHYSICS (1-4)** Prerequisite One course in the Physics Department

**66.497 DIRECTED READINGS (1-4)** Prerequisite One course in the Physics Department

## *SCIENCE EDUCATION COURSES (SCIE)*

**76.376 TEACHING SCIENCE IN THE ELEMENTARY SCHOOL (3)** Significance of science for the elementary school child, its contribution toward his development, criteria for selecting science experiences for children. Open only to Special Professional Program Students, or to those completing work in Summer and Evening classes.

**76.380 TEACHING SCIENCE IN THE SECONDARY SCHOOL (3)** Selection of appropriate content, method and evaluation techniques, analysis of textbooks and resource materials. Open only to Special Professional Program Students, or to those completing work in Summer and Evening classes.

**76.401 SEQUENTIAL SCIENCE MODULES FOR THE ELEMENTARY SCHOOL TEACHER (1-3)** Three different modules of instruction including (1) Life Science, and (2) Physical Science, and (3) Earth/Space Science will be offered for teachers of the primary and intermediate grades. The course will emphasize instructional strategies in both the processes and content of the science. A student may elect to take 1, 2, or all 3 modules for 1, 2, or 3 credit-hours respectively. All students must attend the first class meeting for course orientation. Thereafter, each module will meet once a week for four weeks. Each meeting will consist of approximately 4 hours laboratory work. Prerequisite Teaching experience in the elementary school.

**76.488 (26.488) AEROSPACE EDUCATION WORKSHOP (3)** In cooperation with CAP, USAF and NASA. A fund of general knowledge about aviation and space exploration. Teaching materials, resources, and field experiences. Usually a weekend at Florida's Cape Kennedy Space Center and other day long tours. TBA. For K-12 teachers, supervisors, administrators and students of teaching. LAB FEE \$15.00 which includes travel charges. 3 weeks. Summers only.

## *Graduate Division*

**76.585 SEMINAR IN ELEMENTARY SCHOOL SCIENCE (3)** Seminar approach to current practices and trends in organizing, teaching and improving programs in elementary school science. Each student conducts a limited research on some aspect of science teaching. Prerequisite Elementary teaching experience.  
104/Physics

# Psychology

Chairperson: James M. Furukawa

Graduate Studies Coordinator:

Counseling: Edward Neulander

General Psychology: Stuart Miller

School Psychology & Clinical Psychology: Barbara Slater

## *PSYCHOLOGY COURSES (PSYC)*

### *Upper Division — Undergraduate and Graduate*

**70.305 PSYCHOLOGY OF LEARNING (3)** Analysis of selected problems in both human and animal learning including reinforcement, punishment, verbal learning and verbal behavior. Prerequisite: 70.261

**70.309 BEHAVIORAL PHARMACOLOGY (3)** A systematic investigation of the effects of drugs on behavior. Drug classification, historical aspects, methodological considerations, uses in treatment, drug abuse, and related topics will be considered. Prerequisite: 70.261 or consent of instructor

**70.311 BEHAVIOR MODIFICATION I (3)** Examination and application of the basic principles of the experimental analysis of behavior, with an emphasis on the applied aspects of this modern discipline to schools, jobs, interpersonal relations and self-control. Prerequisite: 12 hours of Psychology, including 70.261

**70.312 BEHAVIOR MODIFICATION II (3)** Intensive academic and practicum training in various individually oriented behavior therapy techniques. Close individual supervision in practicum work. Prerequisite: 70.311.

**70.315 (303) MOTIVATION (3)** Theories of motivation, motivational antecedents, and the consequences of such antecedents on instrumental behavior, learning and perception. Prerequisite: 6 hours

**70.317 SENSATION AND PERCEPTION (3)** A systematic investigation on the basic senses such as vision, audition, taste, smell, and touch will be undertaken. The organization of sensory input will also be emphasized. Both human and non-human data will be presented. Prerequisite: 70.261

**70.321 (407) ADOLESCENT PSYCHOLOGY (3)** Physical, emotional, intellectual development during adolescence, social development and heterosexuality, adolescent personality; problems of adjustment, juvenile delinquency. Prerequisite: 70.211 or 70.201

**70.330 (304) PSYCHOLOGY OF INDIVIDUAL DIFFERENCES (3)** Individual differences in human traits and characteristics, methodology, basic principles, and major findings in research. Prerequisite: 70.101 and 70.111

**70.350 (305) PERSONALITY (3)** Theoretical and practical approaches to the study of personality. Introduction to psychodynamics and to methods and materials of assessment. Prerequisite: 6 hours

**70.361 (306) ABNORMAL PSYCHOLOGY (3)** Disordered personal reactions to life. Organic and functional phenomena plus therapeutic techniques. Prerequisite: 9 hours

**70.370 (331) FOUNDATIONS OF REHABILITATION COUNSELING (3)** The development of rehabilitation programs, their legal basis and historical background. The role of medical, psychological, educational and community resources in the rehabilitation program are explored. Client eligibility, determination, and counselor responsibilities will be reviewed. Prerequisite: 70.101

**70.381 (391) READINGS IN PSYCHOLOGY (1-2)** A survey of relevant research literature under the guidance of a staff member who will direct the students' research. Prerequisite: 70.261, Honors approval or consent of instructor.

**70.383 PROCTORING IN PSYCHOLOGY (3)** Students serve as teaching apprentices or proctors in a course which they have already completed (such as General Psychology), and which they must relearn to 100% mastery. Students will manage the learning and evaluate individual progress of the members of the class assigned to them. The experience includes guidance, support, and motivation of the assigned students, all in a supervised situation. Prerequisite: Successful completion of 5 or more Psychology courses or: general, educational and child, or adolescent psychology and Principles of Education, and consent of instructor.

**70.385 SEMINAR IN PSYCHOLOGY (1-3)** Survey and critical evaluation of modern literature pertaining to selected problems in Psychology. Prerequisite: 70.261, Consent of instructor.

**70.401 HUMAN LEARNING (3)** This course will focus upon aspects of learning applicable specifically to human behavior. This includes such topics as acquisition, memory, problem solving, creativity and language. Topics will be discussed within a framework of historic and current theoretical research perspectives. Prerequisites: 70.305, 70.261.

**70.405 THE PSYCHOLOGY OF AGING (3)** A study of the changes in learning, emotions, personality and social behavior and the impact of culture and attitude on the aging process. Prerequisite: 6 hours of Psychology. Students should be aware of how to read and understand psychology journals and how psychological research is conducted.

**70.407 PSYCHOLOGY OF READING (3)** Psychological foundations of current technology for teaching reading and improving reading skills. Study, evaluation, and implications of psychological studies; psychological models of reading (cognitive, information processing, and chunking), and learning theory on the beginning, intermediate, and advanced reader. Prerequisite: General (70.101); Educational (70.201); Child (70.211) or Developmental (70.511) Recommended: (87.105) Speech and Language Development.

**70.411 (410) TESTS AND MEASUREMENTS (3)** Psychological and educational testing and evaluation. The construction, administration, interpretation and use of the various evaluative devices of aptitude and achievement. Prerequisites: 70.101 and 70.111.

**70.413 CLINICAL TESTING PROCEDURES I (3)** Introduction to testing in a clinical setting. The nature of tests. The nature of personality assessment. Referral problems. Psychometric approach to specific test of intelligence and organicity. Role of examiner. Ethical standards. Prerequisite: 70.361 and 70.111

**70.414 CLINICAL TESTING PROCEDURES II (3)** Psychometric use of projective techniques Test observation. Reporting test data. Ethical use of psychometrical techniques. Prerequisite: Clinical Testing Procedures I. 70.413.

**70.416 (411) PERSONALITY MEASUREMENT (3)** A continuation of 70.411 that will emphasize the use and interpretation of instruments for measuring attitudes, interests and related aspects of personality. Instruments studied will include paper-pencil inventories, projective devices and observational procedures. Prerequisites: 70.411 and 70.230 or 70.361.

**70.421 APPLICATIONS OF BEHAVIORAL PRINCIPLES TO FAMILY AND CLASSROOM ENVIRONMENTS (3)** Practical application of operant techniques to child management and family functioning. Course will deal with behavioral analysis, behavior modification programs and family contracting both at school and at home, with emphasis on learning basic technical skills. Prerequisite: 70.211.

**70.425 (423) INTRODUCTION TO THE HELPING RELATIONSHIP (3)** Current concepts of the helping relationship and an exploration of the conditions that facilitate its effectiveness. Prerequisite: 70.101, and psychology major or minor planning to enter one of the helping professions, or graduate student in Counseling, or consent of the department.

**70.427 INTRODUCTION TO INTERVIEWING TECHNIQUES I (3)** An introduction to interviewing with the examination of real interviews with children in difficulty. The theory and methods of delivery of helping services via the interview. Prerequisite: Minimum of 2 months interviewing experience and permission of instructor.

**70.428 INTERVIEWING TECHNIQUES II (3)** This is a continuation of 70.427. The course explores more deeply the unique relationship of the interviewer to the client. There is practical experience with Critiquing of interviews of students. Prerequisite: 70.427.

**70.430 (426) SYSTEMS AND TECHNIQUES OF COUNSELING PRACTICE (3)** Review and application of current theoretical approaches to the helping relationship. Prerequisites: 70.425 and either 70.230 or 70.361.

**70.431 GROUP DYNAMICS (3)** Intensive study of group interactions with emphasis upon reciprocal group influence of behavior. Prerequisite: 70.221 or consent of instructor.

**70.435 (427) SUPERVISED FIELD EXPERIENCE (3-6)** Placement in a community service agency to familiarize the student with its current practices. Supervised client contact will be provided. Prerequisite: 70.370, 70.430 and departmental consent.

**70.437 CLINICAL INTERVIEWING I (3)** Combined didactic and experiential coverage of types of interviews, dimensions of interviewer input, interviewee response and relationships. Prerequisite: 70.425 plus admission in Clinical Concentration in Psychology.

**70.439 CLINICAL INTERVIEWING II (3)** Clinical observation and practicum experience. Focus on interviewer and interviewee dimensions and relationship with patients. Use of tapes, seminars and individual supervision. Prerequisite: 70.437.

**70.441 INFORMATION SERVICE IN COUNSELING AND GUIDANCE (3)** Educational and vocational resources. Evaluation, classification and use of much information. Prerequisite: 70.101.

**70.443 FIELD TRAINING IN HUMAN SERVICES (1-2)** Work experience in a hospital or clinic setting in the field of human services. Prerequisite: Acceptance in Clinical Concentration.

**70.451 INTRODUCTION TO ACTIVITY THERAPY (4)** Principles and procedures of activity as a method of therapy (e.g., occupational, recreational, vocational, music, dance, art, drama). Practicum includes observation of various methods and participation under supervision in occupational and recreational therapy. Prerequisites: 70.350, 70.361, 70.431.

**70.453 INTRODUCTION TO PSYCHOTHERAPY I (3)** Readings and lectures and seminars relating to psychological emergencies and the modes of intervention during psychological crises. Prerequisite: 70.425.

**70.455 INTRODUCTION TO PSYCHOTHERAPY II (4)** Survey of methods and techniques to dyadic therapy using selected readings. Practicum involving observation and seminar discussions and participation with individual supervision. Prerequisites: 70.425 and 70.453.

**70.457 ADJUNCTIVE SERVICES TO FAMILIES OF PATIENTS (4)** Organization and adaptation of treatment procedures to the family as a group, and to individual relatives. Practicum at a neighboring state hospital, under supervision. Prerequisites: 70.211, 321, 361, 80.203 and 70.453. Clinical Concentration students.

**70.460 (409) COMPARATIVE PSYCHOLOGY (4)** The differences in behavior between species will be compared within a framework of learning, ethology, and neuropsychology. Three hours of lecture, two hours laboratory per week. Prerequisite: 70.261.

**70.461 COGNITIVE PSYCHOLOGY (3)** This course will deal with the nature of the cognitive processes, an analysis of the organization of cognitive abilities, and problems in cognition. Theoretical viewpoints will be explored including those of Piaget, J.P. Guilford, Ausubel, Lewin, Skinner. A comparison among theories will be made as they relate to the thinking processes. Prerequisites: 70.203, 70.205 or consent of instructor.

**70.465 (412) PHYSIOLOGICAL PSYCHOLOGY (4)** The physiological basis of behavior, with consideration of receptor, central and effector structures and function. Three hours lecture, two hours laboratory per week. Prerequisite: 70.261 or consent of instructor.

**70.471 (460) INTRODUCTION TO THE EXCEPTIONAL CHILD (3)** Children with a typical physical, mental, social and emotional development, including the physically handicapped, the mentally retarded, the gifted, and emotionally disturbed children. Prerequisite: 70.201 or 70.211.

**70.475 IDENTIFICATION AND TREATMENT OF SENSORY DISABILITIES IN THE SCHOOLS (3)** The use of psychological and informal tools to identify sensory disabilities related to perceptual development, and the employment and development of treatment methods will cover the first half of the semester. During the second half of the semester, students will be actively involved in working with children experiencing these difficulties. Gross and fine motor coordination, visual-motor coordination, ocular control, auditory discrimination, and verbal skills will be covered. Prerequisite: Consent of coordinator of School Psychology.

**70.480 (488) SYSTEMS OF PSYCHOLOGY (3)** Schools of psychology with their theoretical and methodological approaches. Prerequisite: Consent of instructor.

**70.485 (486) EXPERIMENTAL DESIGN (4)** Design and analysis - Analysis of variance (completely randomized design, repeated measurement designs, etc.), multiple comparisons, nonparametrics, general problems related to sampling, experimental effects, etc. Prerequisites: 70.111 and consent of instructor.

**70.491 (490) INDEPENDENT INVESTIGATION IN PSYCHOLOGY (3)** An opportunity for especially qualified students to undertake research problems according to their interest and training under the direction of a staff member. Prerequisites: 70.261 and consent of department.

### *Graduate Division*

**70.511 (501) DEVELOPMENTAL PSYCHOLOGY (3)** Psychological structures and functions in human development. Theoretical and research approaches. Prerequisite: 70.201 or equivalent.

**70.515 INTRODUCTION TO RESEARCH METHODS IN COUNSELING (3)** An introduction to the principal methods of behavioral research emphasizing concepts rather than statistical procedures. The course should prepare counselors to evaluate methods, designs, and results of counseling research. Prerequisite: Graduate standing in Counseling.

**70.520 INDIVIDUAL INTELLIGENCE TESTING (3)** Construction, standardization, administration, scoring and interpretation of the Wechsler Individual Intelligence Tests, the Stanford Binet Intelligence Scale, Human Figure Drawings, the Bender Gestalt, the Gray Oral Reading Test and the Wide Range Achievement Test. Prerequisite: 70.111 and 70.411. Open only to M.A. candidate in School or Clinical Areas. Consent of Coordinator.

**70.521 (505) ADVANCED EDUCATIONAL PSYCHOLOGY (3)** Survey of current research in Child Psychology, Learning, Mental Hygiene, and Tests and Measurements. Emphasis on critical analysis of studies. Prerequisite: 70.511.

**70.531 (506) ADVANCED ABNORMAL PSYCHOLOGY (3)** Current and historical perspectives of psychopathology. Emphasis on varied approaches in contemporary schools. Methods of assessment and treatment. Prerequisite: 70.230 or 70.361.

**70.540 (553) MENTAL HYGIENE IN EDUCATION (3)** Principles of mental hygiene and their application to the educational setting. Major emphasis on wholesome personality development. Prerequisite: 70.511.  
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**70.543 INTRODUCTION TO SCHOOL PSYCHOLOGY (1)** An introduction to ethics and issues in school psychology and preparation of the student to move efficiently through the program. This course should be taken at the beginning of the student's course of studies. Prerequisite: Open only to MA candidate in the School Psychology Area. Consent of the Coordinator.

**70.545 COPING STRATEGIES IN THE CLASSROOM (3)** Practical application of psychological principles and concepts as related directly to the classroom. This course is designed to increase teacher awareness of the teacher's impact on the classroom members with specific emphasis on individual differences. This course is for teachers, counselors and administrators. Prerequisite: 70.511 or equivalent.

**70.550 (557) DIAGNOSTIC TECHNIQUES IN EDUCATION (3)** Use of standardized and teacher-constructed instruments for diagnostic and instructional purposes. Prerequisite: 70.511, 70.411 or equivalent.

**70.551 TECHNIQUES OF GROUP INTERVENTION (3)** A theoretical and experiential introduction to the techniques available for use with children experiencing difficulty in the school environment. Emphasis will be on learning the techniques through action participation. Prerequisite: MA candidate in School or Clinical Areas or in Counseling Areas. Consent of the Coordinator.

**70.553 ISSUES AND RESEARCH IN SCHOOL/CLINICAL PSYCHOLOGY (3)** Provides for analysis of major issues in school and/or clinical psychology through the study of selected research. Prerequisite: 70.111. Open only to MA candidate in School or Clinical Areas. Consent of coordinator.

**70.563 SYSTEMS OF PSYCHOTHERAPY (3)** Course is designed to acquaint students with the more prominent schools of psychotherapy. Particular emphasis is placed on the psychotherapeutic aspect of educational and clinical settings. Prerequisites: 70.350, 70.361 or 70.230, 70.531.

**70.565 ADVANCED PSYCHOTHERAPY I (3)** The first of a two semester sequence presenting major contemporary psychotherapeutic approaches. Areas under consideration will be: theoretical constructs and techniques, relevant research, issues related to the professional practice of psychotherapy. Advanced Psychotherapy I may be taken without Advanced Psychotherapy II. Open to students with a Master's degree in psychology or allied fields. Prerequisite: Graduate standing in Psychology or Counseling.

**70.566 ADVANCED PSYCHOTHERAPY II (3)** The second of a two semester sequence focused on the continued analysis of major psychotherapy approaches. Each student will conduct an intensive examination of a single psychotherapeutic approach. A seminar paper and a class presentation of the paper will be required. Open to students with a Master's degree who have completed equivalent of Psychotherapy I. Prerequisite: Advanced Psychotherapy I.

**70.570 (S19) REFERRAL RESOURCES FOR THE SCHOOL AGE CHILD (3)** A study of referral services for the enhancement of the emotional, vocational and the behavioral adaptation of children in need of services beyond the classroom situation. The course attempts to give direct knowledge to the student of all such specialized facilities both school and community sponsored. Prerequisite: 70.511.

**70.573-70.574 ADVANCED EXPERIMENTAL PSYCHOLOGY I, II (4,4)** The first semester is comprised of experimentation in the field of human behavior, and the second semester will emphasize experimentation in the field of animal behavior. Prerequisite: 70.111, 70.261 or equivalent. Consent of department.

**70.575 PROSEMINAR I (3)** An intensive survey of basic issues and concepts in learning, perception, motivation, and physiological psychology. Prerequisite: 70.261 or equivalent.

**70.576 PROSEMINAR II (3)** An intensive survey of basic issues and concepts in social, developmental, personality, and abnormal psychology. Prerequisite: 70.261 or equivalent.

**70.577 LEARNING (3)** A thorough coverage of major learning theories and models. Prerequisite: 70.305 or equivalent. Consent of department.

**70.579-80 SEMINAR IN PSYCHOLOGY (2)** Exploration of current developments in psychology. Topics dependent upon student and faculty interest.

**70.581 ADVANCED HISTORY AND SYSTEMS OF PSYCHOLOGY (3)** Ancient and modern psychological history; discussion of ancient history will draw heavily from both philosophy and physiology; discussion of modern history will develop psychology in various countries. The analysis of systems will include a study of functionalism, structuralism, behaviorism, Gestalt and psychoanalysis

**70.584 COLLEGE TEACHING SEMINAR (3)** Materials and procedures for producing successful students in lower level courses will be explored.

**70.585 COLLEGE TEACHING PRACTICUM (3)** Supervised teaching of introductory psychology. Prerequisite: 70.584.

**70.587 ADVANCED EXPERIMENTAL DESIGN I (3)** An advanced treatment of descriptive and inferential statistical methods and design considerations. Prerequisite: 70.111 or equivalent.

**70.588 ADVANCED EXPERIMENTAL DESIGN II (3)** An in-depth treatment of advanced analysis of variance designs and related techniques. Prerequisite: 70.587 or equivalent

**70.589 MULTIVARIATE METHODS (3)** Multivariate statistical methods useful in behavioral scientific research. Topics: correlation, regression, factor analysis, discriminant analysis. Prerequisite: 70.587 or equivalent.

**70.591 (515) PROJECTIVE TECHNIQUES I (3)** This is the first of a two-course sequence dealing with projective techniques. Credit will be awarded only upon completion of the first and second semesters of the sequence. The first semester emphasizes an introduction to the administration, scoring and interpretation of projectives in current clinical use. Prerequisite: Open only to M.A. candidate in School or Clinical Areas. Consent of coordinator.

**70.592 (516) PROJECTIVE TECHNIQUES II (3)** The second of a two semester sequence in projective techniques. This semester emphasizes the interpretation and appropriate transmission of projective data. Particular emphasis will be placed on the evaluation of learning problems. Prerequisite: Open only to M.A. candidate in School or Clinical Areas. Consent of coordinator

**70.605 (511) PRINCIPLES OF GUIDANCE (3)** Aims at establishing a philosophy and gaining a knowledge of the principles of guidance. Includes an introduction to the literature of the field. Prerequisite: 70.511 or equivalent

**70.607 (520) OCCUPATIONAL INFORMATION (3)** Provides students with knowledge of educational and vocational opportunities and community referral sources essential to a sound guidance program. Includes evaluation, classification and use of such information in the instructional program. Group guidance, counseling and placement. Prerequisite: 70.605

**70.611 (512) ANALYSIS OF THE INDIVIDUAL (3)** Techniques available in studying the individual. Emphasizes data in the areas of vocational, educational and personal adjustment. Prerequisites: 70.605 and 70.411. (70.605 may be taken concurrently.)

**70.615 (510) TECHNIQUES OF COUNSELING (3)** Counseling and therapy techniques used by counselors and other professional personnel working with children and adults. Prerequisite: 70.430 or equivalent.

**70.617 THE HOLTZMAN INKBLOT TECHNIQUE I (3)** Introduction to the Holtzman Inkblot Technique, administration and scoring of the test record. Prerequisite: 70.591.

**70.618 THE HOLTZMAN INKBLOT TECHNIQUE II (3)** Interpretation of scored records (a) based on the 22 scoring variables and (b) based on Personality variables. Prerequisite: 70.617.

**70.621 (514) GROUP TECHNIQUES IN GUIDANCE AND COUNSELING (3)** The selection, organization and effective use of group guidance materials and technique in providing for the common needs of groups of students in making more effective educational, occupational, social and personal adjustment. Prerequisites: 70.430 and 70.441

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**70.625 COUNSELING OF MINORITY GROUPS (3)** A study of the counseling function with emphasis upon minority groups needs, counselor attitudes, and techniques. Special focus on counseling in the urban school setting and techniques to be used with minority students. Prerequisite: 70.430

**70.627 (527) USE OF TESTS IN COUNSELING (3)** Practice in the use and analysis of techniques for understanding the individual with emphasis upon standardized procedures used in the public schools. Prerequisite: 70.611

**70.630 (517) COUNSELING THE ELEMENTARY SCHOOL CHILD (3)** Study of the dynamics of child behavior, techniques and assessing and counseling. Study of the family, school, and community structures and their effect on the child. Prerequisite: 70.430

**70.635 (530) COMMUNICATION MEDIA WITH CHILDREN I (3)** Introduction to the methods and materials used in diagnostic and therapeutic approaches to children. Use of toys, art media and play activities emphasized. Prerequisite: 70.615 or equivalent.

**70.636 (531) COMMUNICATION MEDIA WITH CHILDREN II (3)** A continuation of 70.635 with emphasis upon practical application of therapeutic use of play media. Use of the play-room and its materials will be emphasized. Prerequisites: 70.645 and 70.635

**70.645 (523) COUNSELING PRACTICUM I (3)** Supervised experience in educational, vocational and personal counseling. Prerequisites: 70.430 plus consent of department. Fall, Spring, Summer. Credit will be granted for this course upon completion of 70.646 or 70.635-636.

**70.646 (525) COUNSELING PRACTICUM II (3)** Field experience in educational, vocational and personal counseling. Prerequisites: 70.645 plus consent of department.

**70.651 (521) PRACTICUM IN SCHOOL/CLINICAL PSYCHOLOGY (3)** Provides an opportunity to participate in diagnostic, remedial and therapeutic planning as well as follow-up studies under supervision of practicing certified psychologists. Prerequisites: 70.520, 70.591, 70.592. M.A. candidate in School or Clinical Areas. Consent of coordinator.

**70.652 (522) INTERNSHIP IN SCHOOL/CLINICAL PSYCHOLOGY (3)** Each student must be a full-time student during the semester he/she enrolls in this course, typically the last semester of work. The student will be placed on internship in a school or clinic, depending upon his/her specific orientation. He/she will participate in the complete workings of that agency under the direct supervision of a practicing certified psychologist. Prerequisite: 70.651. M.A. Candidate in School or Clinical Areas. Consent of coordinator.

**70.690 (591) SEMINAR IN SCHOOL/CLINICAL PSYCHOLOGY (3)** Consideration of current practices, trends, and techniques in School or Clinical Psychology. Prerequisite: Open only to M.A. candidates in the School or Clinical Areas.

**70.699 THESIS (3)** Optional for students in Master of Arts for School Psychology Program. Required for students in Master's of Arts in General Psychology.

### **MINIMESTER ONLY**

**70.005 SEXUAL COUNSELING (3)** Introduction to human sexual relationships, with emphasis on social and sexual problems and new treatment techniques for sexual dysfunction. Included is the work of Kinsey, Masters and Johnson, Kaplan, Wolfe, and others. Prerequisite: Psychology, health science, or nursing major or consent of the department.

# Sociology and Anthropology

Chairperson: Irwin Goldberg

## *SOCIOLOGY COURSES (SOCI)*

### *Upper Division — Undergraduate and Graduate*

**80.303 SOCIAL WELFARE (3)** Historical development, philosophy and theory; processes developed and fields of social work, Federal, State and community programs. Prerequisite: 80 101

**80.311 SOCIOLOGY OF AGING (3)** Examination of social factors in aging from the viewpoint of the individual, the group and society; socialization process and old age, identity and social roles, loneliness and alienation, demographic aspects of aging, societal definitions, norms, values, dilemmas, and responses to the aging, evaluation of research in social gerontology. Prerequisite: 80 101.

**80.321 SEX ROLES IN CROSS CULTURAL PERSPECTIVE (3)** Materials from a variety of cultures will be used to illustrate and analyze the roles of women and men within the man or institutional aspects — the family, economics, politics and religion. Particular attention will be devoted to the similarities and differences in sex role patterns within and between cultures. Prerequisite: 80 101 or 10 207.

**80.342 SOCIAL STRATIFICATION (3)** The nature of social stratification, relationship of social mobility to social organization, social class structure in traditional and dynamic societies. Prerequisite: 80 101

**80.343 SOCIAL CHANGE (3)** A sociological analysis of the sources, processes and consequences of social change. Prerequisites: 80 101 and consent of instructor.

**80.344 URBAN SOCIOLOGY (3)** Survey of the theoretical and sociological conceptualizations of modern Western industrial cities. Prerequisite: 80 101

**80.345 ORGANIZATIONS (3)** Structure and functioning of large-scale organizations; formal and informal aspects of bureaucracies in business, government, politics, education, and other institutional spheres of society. Prerequisite: 80 101

**80.347 COMMUNITY ORGANIZATION (3)** The organization of the community as a vehicle for identifying and meeting human needs, processes and techniques of community planning and development, traditional and contemporary. Prerequisite: 80 101

**80.349 POLITICAL SOCIOLOGY (3)** The contemporary relevance of the fundamental ideas regarding the relationship of the social and political systems, the significance of social and political democratization, class struggles and revolution, the influence of governmental bureaucracy. Prerequisite: 80 101

**80.357 IDEOLOGY, POWER AND SOCIETY (3)** Influence of the structure of society and its political conflicts on the ideas which men hold and in the name of which they struggle, the social and political sources of social movements and belief systems, the industrial society and its influence on the nature of masses and elites, the socio-political role of intellectuals. Prerequisite: 80 101

**80.363 INDIVIDUAL AND SOCIETY (3)** A social psychological approach to the interrelationships of the individual and his social and cultural environment, behavioral characteristics resulting from social experience. Prerequisite: 80 101

**80.381 MINORITY GROUPS (3)** An examination of intergroup life as an aspect of society, conflicts between races, ethnic groups, and minorities, prejudice, segregation and integration. Prerequisite: 80 101

**80.383 CRIMINOLOGY (3)** The nature of crime, factors underlying criminal behavior, police, courts, law, and correctional institutions. Prerequisite: 80 101

**80.386 JUVENILE DELINQUENCY (3)** A study of delinquency the process of socialization and delinquent behavior in society, prevention and treatment of delinquency Prerequisite 80 101

**80.392 DEMOGRAPHY (3)** Social, economic and political problems related to changes distribution and movement of population, analysis of contemporary population trends in the U S and the world Prerequisite 80 101

**80.401 MEDICAL SOCIOLOGY (3)** A study of social and cultural perspectives on illness, demographic trends, the health professions, and institutions for the delivery of health care services Prerequisite 80 101

**80.403 COLLECTIVE BEHAVIOR (3)** Study of historical and contemporary major unstructured and semi-structured situations, crowds, mobs, riots Prerequisite 80 101

**80.406 SOCIOLOGY OF EDUCATION (3)** Sociological analysis of education as a basic social institution, formal and informal organizations of education systems, relationship to socialization, major social trends in education, concept of academic freedom Prerequisite 80 101

**80.407 SOCIOLOGICAL THEORY (3)** Major systems of sociological theory, the works, assumptions, and workings of major European and American schools Prerequisites 80 101, and nine additional hours of sociology

**80.408 ADVANCED SOCIOLOGICAL THEORY (3)** Critical analysis of emerging theoretical schools Attention will be given to contemporary theoretical problems Prerequisites 80 101 and 80 407

**80.457 SOCIAL DEVIANCE (3)** Deviance as an aspect of social living, the problem of understanding conformity and deviance, identification of deviants, society's response to deviant behavior Prerequisite 80 101

**80.470-479 SPECIAL TOPICS IN SOCIOLOGY (3)** An examination of current topics in sociology The content of the course will depend upon mutual faculty and student interest Prerequisite 80 101

**80.485 SEMINAR IN SOCIOLOGY (3)** Exploring and analyzing major areas of Sociology Prerequisite 80 407 and consent of instructor.

**80.495 RESEARCH METHODS (4)** A consideration of methodology of sociological research, the various steps in conducting research projects, from statement of the problem to final analysis of data Prerequisites: 80 101, nine additional hours of sociology and either PSYC 70 111 or MATH 50 231

**80.499 INDEPENDENT RESEARCH (3)** Supervised research and sociological investigation involving library and/or field experiences, and culminating in a written report Prerequisites: 80 495 and 80 407 and consent of instructor

## **ANTHROPOLOGY COURSES (ANTH)**

### ***Upper Division — Undergraduate and Graduate***

**10.346 (80.346) POLITICAL ANTHROPOLOGY (3)** Comparative political institutions and behavior among contemporary non-literate societies Theoretical problems of social control, state and non-state systems, symbolic aspects of power, levels of political integration, and welfare Prerequisite 10 207

**10.364 (80.364) RELIGION, MAGIC AND WITCHCRAFT (3)** The world view, beliefs, and rituals of selected non-literate peoples considered with reference to religion as a universal category of human culture Prerequisite 10 207

**10.365 (80.365) ETHNOLOGY OF NORTH AMERICA (3)** A comparative description and interpretation of native American Indian culture Prerequisite 10 207



**86.355 STAGE LIGHTING (3)** Theory of light and electricity with emphasis on the planning of light plots. Aesthetic effort of stage lighting and problems of lighting small stages with minimum equipment. Prerequisites: 86 251 or consent of instructor

**86.361 (380) DESIGN FOR THE STAGE (3)** Theory and practice of designing scenery for the stage. Includes a study of the relationship of the set design to the script and other elements of production, and examination of research techniques in preparation for scene designing and practice in designing scenery for many styles and types of drama. Prerequisite: 86 251 or consent of instructor

**86.371-372 THEATRE GAMES I,II (1,1)** Exercises in acting designed to develop the individual's creativity and encourage work on personal acting techniques. Prerequisite: 86 221

**86.401 THEATRE AS A PROFESSION (1)** Working conditions, unions, employment opportunities in the theatre. Preparation of professional credentials, audition material, etc. Prerequisite: Theatre Arts major or consent of instructor

**86.407 THEATRE ARTS FOR CHILDREN — ADVANCED (2)** Practical experience in directing and guiding Theatre Arts with children in a classroom or other arranged situation. Prerequisite: 86 307

**86.411-412-413 PROBLEMS IN ACTING OR DIRECTING I, II, III (1-3, 1-3, 1-3)** An upper level course designed to deal with the student's acting or directing problems on an advanced level. Prerequisites: 86 221, 86 222, 86 231

**86.421 PLAY DIRECTING II: THE CONTEMPORARY PLAY (3)** Preparation techniques and directorial approaches to contemporary drama. Individual directing projects of scenes from representative contemporary dramas. Prerequisite: 86 331 or consent of instructor

**86.431 (470) PLAY DIRECTING III: THE PERIOD PLAY (3)** Research techniques and directorial approaches to period drama. Individual directing projects of scenes from representative period dramas. Prerequisite: 86 331 or consent of instructor.

**86.441 (451) COSTUME DESIGN (3)** Study of theories, principles, of costume design and practice in designing costumes for the stage. Including a study of the relationship of color, texture, and historical period to the script and style of a theatrical production. Also practical use of costume research techniques in preparing designs. Experience in designing costumes for many historical periods and styles of plays.

**86.471 PRODUCING STORY THEATRE IN THE SCHOOLS (2)** The history, theory, and techniques of story theatre. The application of story theatre to all levels of education, with emphasis on the secondary schools. Prerequisites: One Speech or Drama course plus teaching experience, or consent of the instructor.

**86.473 WORKSHOP IN STORY THEATRE (2)** Practical experience in producing story theatre. Each student will direct at least one story theatre production and perform in at least one story theatre production. Prerequisite: The workshop should only be taken concurrently with Story Theatre in the Schools.

**86.475 USING THEATRE GAMES TECHNIQUES IN THE SCHOOLS (2)** The theory and techniques of theatre games. The application of the problem-solving techniques of theatre games to all levels of education, with emphasis on the secondary schools. Prerequisites: One Speech or Drama course plus teaching experience, or consent of the instructor

**86.477 WORKSHOP IN THEATRE GAMES TECHNIQUES (2)** Practical experience in utilizing theatre games techniques in rehearsal and performance. Each student will develop, rehearse, and produce a project and will also perform in at least one other project. Prerequisite: The workshop should only be taken concurrently with Using Theatre Games Techniques in the Schools.

**86.480-481-482 PROBLEMS IN DESIGN AND TECHNICAL THEATRE I, II, III (1-3, 1-3, 1-3)**

An advanced course enabling the student to derive credit for special problems in the area of technical theatre. Prerequisites: Approval of plan of study by instructor and department chairman. 86.201, 86.241, 86.251

**86.485 ADVANCED THEATRE WORKSHOP FOR SECONDARY SCHOOL TEACHERS (6)**

Open to graduate students and undergraduate students of junior and senior standing who have had courses in theatre and/or practical experience in theatre. May be taken for graduate or undergraduate credit. Students will work with high school students in theatre projects and will have opportunities to design and/or direct. Interested applicants should contact the Director of the Summer Theatre Workshops at the earliest opportunity, preferably June 1.

**86.486 WORKSHOP IN THEATRE PRODUCTION FOR SECONDARY SCHOOL TEACHERS (6)**

Course is open to graduate students and undergraduate students of junior or senior standing who wish to gain practical experience in working with the technical theatre production elements of secondary school theatre. May be taken for graduate or undergraduate credit. Students will work with the College Theatre Department's costume and scenic design staff in conjunction with the Theatre Workshop for High School Students. Prerequisite: Upper division or graduate standing.

**86.487 PROFESSIONAL THEATRE SEMINAR (12)** A semester's internship in a resident theater company. For majors only. Prerequisite: Approval of director of theater.

**86.493-494-495-496-497-498 PROBLEMS IN THEATRE I,II,III,IV,V,VI (1-3,1-3,1-3,1-3,1-3,1-3,)**

Independent study of an academic or creative nature. For majors only. Prerequisite: Approval of plan of study by instructor and director of theatre.

# Administration

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*Joseph P. Gutkoska . . . . . Coordinator, Reading Program*  
*Dell C. Kjer . . . . . Coordinator, Early Childhood Education Program*  
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## NOTES

## NOTES



## NOTES

## NOTES



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See Regulations For Further Explanation

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